

LIGHTING

EQUIPMENT NEWS

MARCH 1991

Lighting up the fast track



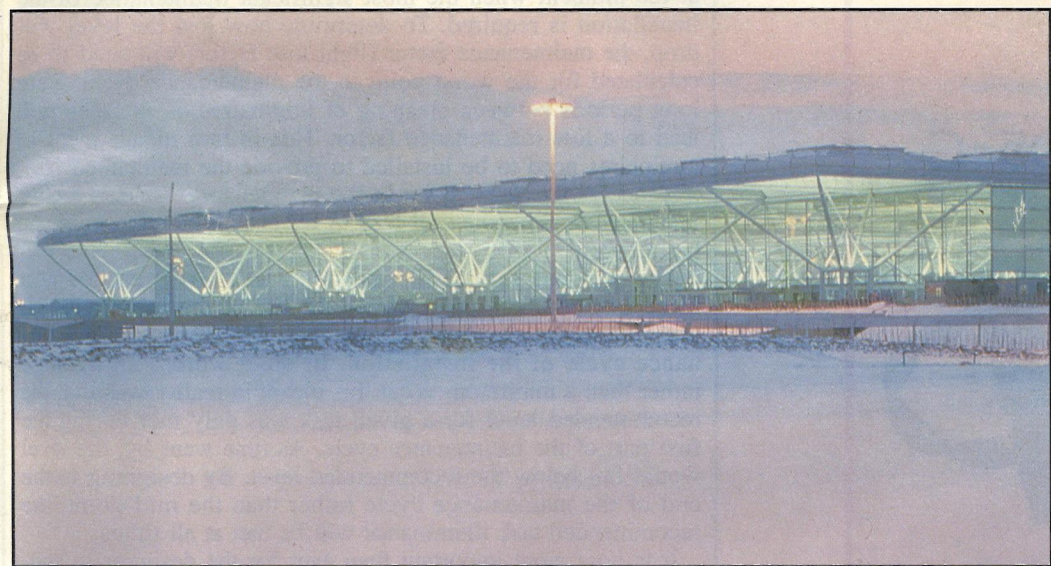
France's famous high speed train, the TGV, holds the world rail speed record — 515.3kph — a speed reached on the new Atlantic branch of the service. Such speeds will not be reached by normal passenger trains, but a service of this quality needs lighting along its route worthy of this technological achievement.

However, the major problem is less one of aesthetics than of the need to ensure that any lighting provided does not interfere with the ability of the driver to see the signalling on the track ahead or distract his attention in any way.

So, for lighting the Gare de Vendôme at Villiers sur Loir, the station at Le Mans and the TGV

platforms at Bordeaux, French railways chose lighting from Thorn's subsidiary Europhane.

Lighting in the covered stretch of the platforms is supplied by groups of four PRT A 16 spotlights used in uplighter mode. The luminaires come equipped with 150W de luxe high pressure sodium lamps on aluminium masts.



Stansted takes off

Norman Foster's 36 000 sq m terminal building for Stansted Airport opens this month. The design of the terminal emphasises its lightness. This is achieved by a total of 36 supports, arranged in a 36m square grid. At a height of 3m the square supports branch out like a tree. Twenty four supports are situated inside the terminal, the remaining twelve supports bear a canopy on the glass exterior. The entire tree structure is visible both from inside and outside. Large areas of glazing on the side walls admit an optimal amount of light.

The architect's main requirements for lighting were that the fittings should be invisible and

should not hang from the ceiling creating a disturbing factor. But Foster wanted uniform lighting of the ceiling, so he decided to conceal the fittings above the supports, in between the branches.

Lighting designer, Claude Engle, and manufacturers, Erco, solved the problem of uniform lighting of the ceiling in spite of the large distances between the supports. Asymmetric reflectors were specially developed for the fittings which comprise three elements: a straight front section with a high mirror finish, a matt base and a matt black reflector housing 400W metal halide lamps. Either four or six of these HPI-T lamps are each fixed with

angle steel plates to the branches of the steel construction. These lighting-sets are connected and form one unit.

The installation units, however, have a different structure for inside and outside lighting. Ballast, capacitor and transformer for the inside fittings are hidden in the support and not incorporated into the 187m x 750 mm x 200 mm housings made of dark grey galvanised steel plates. In the outside fittings, the installation is incorporated in the housing, accounting for the larger dimensions. A total of 96 fittings are installed inside, 48 outside.

Photo: Richard Davies

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Crescent buys Edison Halo

Crescent Lighting has purchased Edison Halo Lighting from Houston-based multi-national, Cooper Industries.

"Edison Halo enjoys a very strong presence in the specification and distribution markets," commented Crescent's MD, Michael Morrison. "The company has tremendous potential. Our intention is to build on its exist-

ing strengths, such as the BS 5750 quality assurance registration and the company's excellent range of products.

The two companies will be run as separate operations with Morrison as managing director of both. "There is some synergy between the sales operations of the two companies but we address specific and different market segments", he continued. "Both companies will, therefore, continue to develop their own product ranges and marketing strategies."

Siemens restructures business in the UK

From 1 April 1991 the Siemens lighting businesses in the UK are to be restructured to bring them into line with the company's policy of separating lamp and luminaire sales and production worldwide. Osram GmbH, a subsidiary of Siemens AG is responsible for the lamps business; and luminaires and lighting systems are provided by the Lighting Systems Division of Siemens AG.

In the UK this separation has now been made possible by the purchase in 1990 of GEC's remaining 51% in Osram-GEC and the subsequent formation of Osram Ltd out of this core business and the company's former sales and marketing arm, Wotan Lamps.

Luminaires

A new company, Siemens Lighting is to be formed to take over the UK luminaires business from Osram on that date, and this will be an integral part of the company's Energy and Automation Division. Included in the handover will be Osram's luminaire manufacturing plant in Birmingham, on which the company

expects to spend some £5m over the next three years. The factory will be modernised and expanded, and will be provided with an on-line CAD/CAM link to Siemens' main factory at Traunreut in Bavaria. This move will help the company to provide a quick response to specifiers' special requirements, enabling Siemens to supply a full-scale lighting service in addition to luminaires.

This rather traditional decision is based on the theory, particularly prevalent in Germany, that light source companies should be seen to be independent of fittings companies. It is usually justified in functional terms by pointing out the difference in the manufacture and marketing of both products. But this structure does cut against the growing trend towards the demand for complete lighting solutions.

Light sources

The UK business is strongly skewed towards light sources. The fittings side employs only 300 staff and last year generated sales of £25m. By contrast, light sources has 1500 employees, pro-

ducing a turnover of £75m.

Thanks to the present position of the German economy, money is available for European research and development to the tune of some £33 m over the next three years. And, in a time of deepening recession, the company is predicting a 10% increase in world turnover.

In the UK the target over the next five years is to achieve a leading share of the fittings market — around 10%, according to Siemens Lighting's managing director designate, Norbert Zipf. So, UK turnover is predicted to increase from £25m in 1989-90 to £36m in 1994-5.

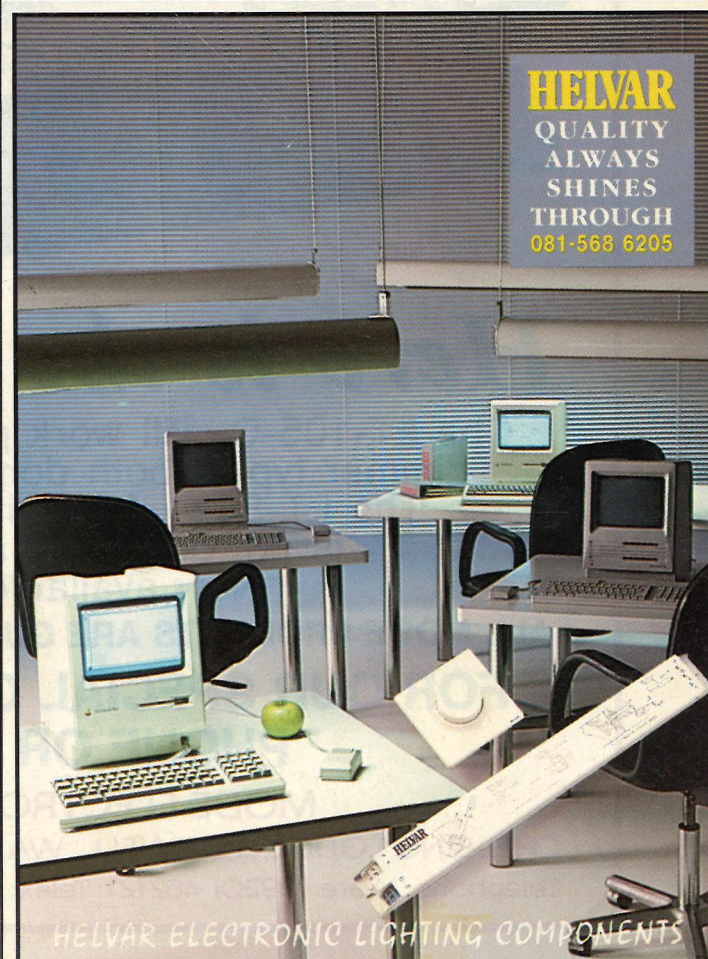
Realignment

This fairly modest expansion plan takes account of the company's need to realign itself within the lighting market over this period; it sees the need to expand into the high technology areas of display lighting and advanced office lighting. In the past the company's main shares of the UK market were in the lower technology fields of outdoor and industrial lighting, and basic office systems.

Goodwin back at Philips UK

Mike Goodwin took over from Hein van der Schoot as managing director of Philips Lighting in February 1991. He is well known in the UK lighting industry as he previously served as Philips' MD in the UK between 1979 and 1988 before taking up a post as executive vice president with Philips Lighting (North America) in the USA.

"My objective will be to ensure that Philips Lighting remains the best-integrated lighting supplier in the UK", said Mr Goodwin, when questioned by *LEN* as to what his approach to running the company would be. "Philips Lighting brings together all of the disciplines necessary to produce an increase in demand for complete lighting solutions. This will remain our policy and in this way we shall continue to strengthen our relationship with our trade partners."



Reader Service No. 1

DIARY

MARCH

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City perception planning. Evening meeting in Manchester organised by North West region of CIBSE. Details from L Daniels 061-228 2331.

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Sick buildings. Evening meeting in London held by London and South East region of CIBSE. Details from Gavin Scarr Hall 0753 23871.

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Lighting for display and merchandising. One-day course in London. Details from CIBSE 081-675 5211.

Trotter Patterson Memorial Lecture. Evening event in London. Details from CIBSE 081-675 5211.

Efficient use of energy in a

modern supermarket. Evening meeting in High Wycombe arranged by London and South East region of CIBSE. Details from Andy Robinson 081-953 6282.

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Recent developments in high frequency ballasts for public lighting. Evening meeting at South Shields arranged by ILE North Eastern region. Details from Martin Clark, 0661 860001.

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Lighting in the electronic age. Evening meeting in Wakefield organised by CIBSE Yorkshire region. Details from A Simpson, 0532 759381.

APRIL

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Developments in stage lighting. Evening meeting in Talk Electric

Centre, Ipswich. Details from Institution of Electronics and Electrical Incorporated Engineers 071-836 3357.

10-17

Hanover Fair, Germany. Commercial lighting exhibition.

Details from A Rustemeyer, 081-688 9541.

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Photographing lighting installations. Evening meeting in London held by CIBSE Lighting Division. Details from CIBSE 081-675 5211.

NEWS

Major lighting conference in UK

The seventh Lux Europa conference will be held in Scotland from 4 to 7 April 1993 at Heriot-Watt University, Edinburgh. It will be the first time this event, which takes place every four years, has been held outside continental Europe.

CIBSE, the organising body, is planning a programme that will embrace the scientific, technical and practical aspects of all lighting, in relation to man and his environment. The three official languages of the conference will be English, French and German and simultaneous translation facilities will be provided.

Lux Europa 1993 will be the first major opportunity for the world's lighting experts to meet after the formation of the single European market in 1992.

The full results of International Daylight Measurement Year will also be available to delegates.



The Chartered Institution of Building Services Engineers

Changing terminology

In the February 1990 issue Lou Bedocs wrote in the CIBSE column about the changeover to the new international set of standard terms defining illuminance. Most of the terms were those we used already, such as average illuminance, minimum illuminance, uniformity and initial illuminance. A new term — maintained illuminance — was introduced to replace service illuminance as the way we specify the illuminance required in a given space. Light loss factor was replaced by the more familiar term maintenance factor.

There has been some concern expressed about changing the way illuminance is specified from service illuminance to maintained illuminance. The concern relates to the implications for specifiers, the timing of the changeover, and possible misunderstanding by clients. To put these questions into perspective we need to look at what each term means.

Maintained illuminance is the average illuminance over the task area below which the illuminance does not fall during the normal life of the installation. In other words, the level reached at the moment when the most significant maintenance of the installation is required. To determine how low the level will drop, the maintenance factor (light loss factor) will need to be calculated for the worst point in the maintenance cycle. Very long periods between cleaning of luminaires or surfaces will lead to a low maintenance factor. This in turn means a lot of luminaires need to be installed to provide the maintained illuminance as the worst point in the maintenance cycle. A better maintenance schedule will lead to fewer luminaires needing to be installed.

The previous service illuminance was a level reached at a more indeterminate point during the life of the installation. It was defined as the mean illuminance throughout the maintenance cycle of the installation. In other words, an average rather than a minimum. What this meant in reality was that the recommended level for a given task was only met during the first part of the maintenance cycle. As time went by, the level would fall below the recommended level. By designing to the end of the maintenance cycle rather than the mid-point, the recommended task illuminance will be met at all times.

It is now more important than ever for the designer to consider the maintenance schedules for each area. The designer needs to know from the client, or to state in the design brief, what the maintenance periods are. Without these the designer will be unable to calculate the low point in the maintenance cycle. It may be better for the client to change the maintenance regime in some way, so as to reduce the maintenance factor, rather than pay for more luminaires initially.

The main reason for the change is that the user will now know that if the maintenance schedule is stuck to, then the lighting level will never fall below the maintained level. This can also be used as a trigger for maintenance: the client needs only to check the lighting level regularly. When the average falls below the maintained level, it is time to carry out maintenance. With the old service illuminance it was always difficult to tell where you were in the maintenance cycle, as it was permitted to drop below the service illuminance level — but, by how much?

The question of the timing of the changeover to maintained illuminance is more complex. The CIBSE Code for Interior Lighting is presently under revision and will be republished in 1992. In the meantime, it still refers to service illuminance. We are taking the opportunity with each new lighting guide that we publish of using only the new term. Thus, the recently published sports guide uses maintained illuminance. The forthcoming teaching spaces and outdoor environment guides will also specify all values in the new way.

Thus we will, for the next two years, have a progressive changeover. Areas referred to in the guides will be specified in the new way and all other areas will be allowed to be specified in the old way. It is, of course, permissible to be allowed to change over completely to the new system. This would be particularly sensible, for instance, in a large sports complex with significant office accommodation. It would seem strange to specify maintained illuminance for the sports areas — as in the sports guide — and service illuminance in the office areas.

Whichever method is being adopted during this transition stage, it must be made clear to the client by the designer. We can then all look forward to a more uniform system Europe-wide in 1992.

Paul Ruffles, Chairman,
Lighting Division Technical Committee.

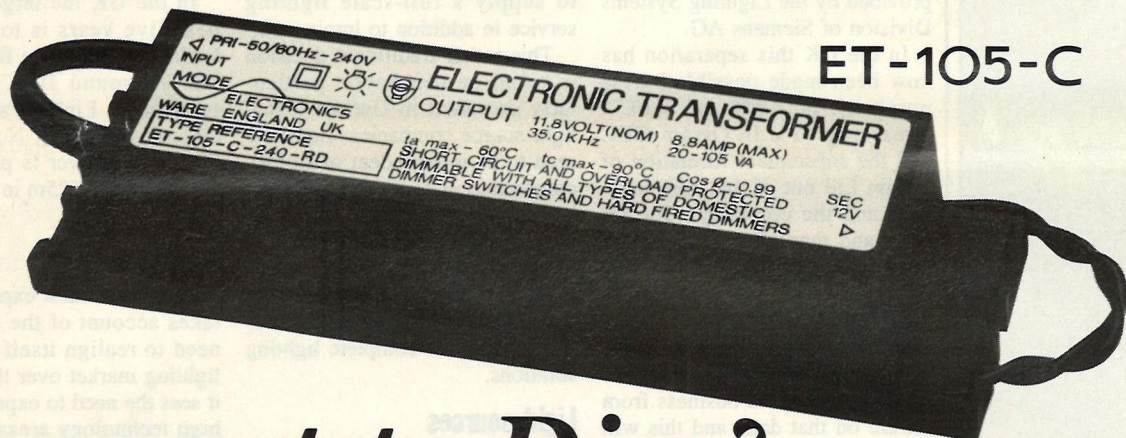
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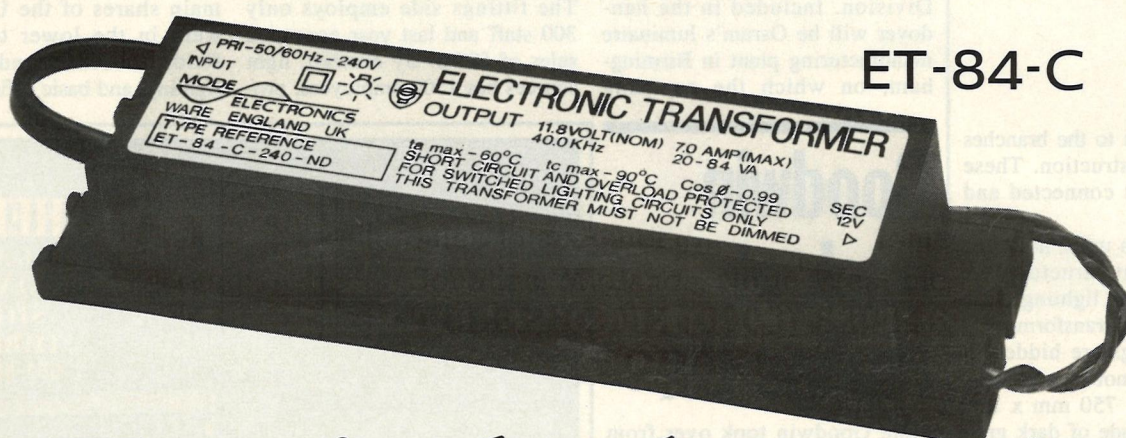
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NEWS

Lighting developments: today and tomorrow

Lighting developments and applications was the title of a conference arranged recently by ERA Technology.

During the session on codes and regulations, Robin Aldworth, Thorn Lighting, said that a new edition of the *CIBSE interior lighting code* was being drafted and was scheduled for publication in 1992. A new policy was being adopted for the 15th edition of referring to maintained illuminance instead of service illuminance.

Maintained illuminance, he said, was the average illuminance over the reference surface at the time maintenance had to be carried out by replacing lamps and/or cleaning the equipment and room surfaces.

The maintenance factor was the ratio of maintained illuminance to initial illuminance (average illuminance when the installation was "new" and the room surfaces clean). Maintenance factor was also known as light loss factor.

The task group was considering introducing a companion volume to the Code which would illustrate good daylight design, interior workplace installations and examples of display and effect lighting.

Mr Aldworth said that suggestions and comments on the Code would be welcomed by the task group.

Speaking about harmonisation of European standards, he said that in effect lighting recommendations for particular interiors and tasks had already been harmonised in Europe.

As far as discomfort glare was concerned, he thought the EC would probably adopt both the German luminance curve system and the UK glare index system.

Quality

Kevin Mansfield, Bartlett School of Architecture and Planning, listed the most important benefits of quality in lighting as the enhancement of the architecture, user satisfaction and comfort, energy efficiency, and improved maintenance regimes.

He said that users liked a sense of security, lightness and definition.

Natural daylight was variable, stimulating, colourful, relaxing and refreshing. The success of an artificial lighting scheme could be measured by how it matched up to those criteria.

The light pattern was important and scanning instruments had been developed to investigate luminance levels and patterns.

Controls

Speaking on office lighting controls, Jim Ure, Associates in Building Services, said the possibilities for lighting control systems were limited only by budget and imagination. He emphasised the importance of explaining to users what a system was trying to achieve. The ultimate test of success was the system's ability to satisfy the user. Without that, it would be judged a failure despite its technical merits and potential savings.



An example of office lighting of the future — one of Philips' offices in Eindhoven, The Netherlands.

Critique

Eric Maddox, of YRM Engineers, gave a designers' critique of luminaires and lamps. He regretted the present day lack of research in the UK and felt that the aim to sell lighting equipment at the lowest possible price did not allow sufficient margin for research and development funds.

Much equipment designed in the USA was not as technically advanced as that from the UK and Europe, he said, in providing VDU-friendly luminaires. Differences in European luminaires which appeared minimal were sometimes significant. UK designers often found themselves having to use lighting tools conceived in countries that had different priorities.

He particularly criticised the design of emergency lighting fittings.

Recessed fluorescent luminaires created problems because fixing trims were several years behind ceiling manufacturers' products.

On the question of lamps, Mr Maddox said that the tolerances on metal halide lamps gave rise to colour shift problems, and although the 35W single-ended lamp was shown in catalogues it was not yet available.

Barry Booth, Osram, answered Eric Maddox's criticisms of lamps.

He said that manufacturers had attempted to offer fluorescent lamps in sizes to suit ceiling modules, including the long compact fluorescent types.

For display lighting, lamp manufacturers' goals had been increased luminous efficacy, lower wattages, smaller sizes and improved colour rendering. These, he said, had been met by new low voltage tungsten halogen and low wattage high pressure discharge lamps.

Low voltage tungsten halogen lamps came in three types: capsule lamps, integral metal reflector and integral glass dichroic reflector lamps.

Efficacy had been improved by changing from transverse to axial filaments.

A controversial change had been the introduction of sealed glass covers which made these miniature lamps easier to handle and protected users from ultra-

violet radiation and possible end-of-life breakages. A proposed change to IEC standards would mean that low voltage luminaires would have to have protective covers, or if that was impossible, then lamps with covers would be used.

The most important disadvantage of covers on the lamps was an increase of about 20°C in the pinch temperature. It could be dangerous, therefore, to exchange open lamps for lamps with covers in luminaires that had been designed very close to the temperature limits.

There had been an enormous growth in the use of metal halide lamps since compact, lower wattage types had been introduced and much had been learnt about their operating characteristics. Research was being done to reduce the colour temperature tolerance of $\pm 300K$. The introduction of electronic control gear also reduced colour shift.

Other causes of colour shift problems were voltage variations, lamps of different ages and lamps incorrectly installed.

Mr Booth's company had a special production line running for 35W metal halide lamps. They were being tested and after quality aspects had been satisfied this wattage lamp would be released onto the market.

New lamp developments he forecast were three-stem compact fluorescent light sources and tungsten halogen lamps with an infra-red coating.

Luminaires

Keith Rippon, Holophane, in reply to Eric Maddox's criticisms of luminaires said manufacturers had problems keeping up with new lamps.

Manufacturing to BS5750 quality standard helped to minimise problems on site.

Harmonisation of standards reduced manufacturers' costs because luminaires did not have to be submitted to several test houses.

Mr Rippon said there was a demand for specialised lighting equipment and it was sometimes possible to refine standard luminaires to suit a niche in the market, for instance sports lighting. This helped manufacturers to

make a profit and sustain the company's growth.

Lighting economics

Bob Venning, Arup Research and Development, looked at many of the energy and cost saving techniques currently used in offices. He considered the inter-related effects in an overall lighting installation rather than each technique in isolation.

His calculations took into account the performance of different lamps, control gear and switching systems.

Mr Venning's thesis was that the total cost of the energy saving elements of an installation would be optimised only if they were carefully chosen. The best energy saving scheme was not necessarily the most economical in the short term.

Tomorrow

In a group of papers discussing lighting ideas for tomorrow, Robert Owen, Applied Lighting Technology, described the use of fibre optic lighting in a traditional interior and in a department store (see *LEN* September 1990).

Jeremy Ling, Philips, discussed office lighting. In the office of the future, he said, there would be more variety of illuminance, with, for instance, one level for conference rooms, another for reading tasks and yet another for VDT work.

Lighting would be part of the move to improve the office environment.

Every office user's needs could be identified in terms of three design elements which varied between individuals: lighting to perform a specific task, create a comfortable environment and create an image.

New light sources was the subject of Dr Stephen Howe, GE Thorn Lamps. He said there was an urgent need to replace more of the traditional, inefficient incandescent lamps with efficient lamps of similar size, shape and weight.

Looking 10 years ahead, he foresaw electrodeless compact fluorescent lamps with longer life and miniature, low power metal halide lamps with cool beams for display lighting. These developments would be achieved by multi-disciplinary teams working together to optimise light sources, control gear and housings.

Energy saving incandescent lamps would be launched with coatings to reflect infra-red radiation back onto the filament.

For a glimpse beyond the year 2000, Dr Howe had looked for clues among patents.

There were hints of discharge lamps with additional components within the discharge tube to allow operation direct from the mains supply.

Solid state light sources would be developed further as the search for suitable light emitting materials continued. In recent years entirely new materials had been grown layer by layer.

But it was always possible that a new principle of producing light might be discovered.

COMMENT

Looking backwards to the future

Peace in our time - and, in this instance, peace with honour. That was the cheering prospect for the Gulf conflict as *Lighting Equipment News* went to press. And, with the liberation of Kuwait and the end of hostilities, comes the opportunity for British manufacturers and lighting engineers to tender for reconstruction work in both Kuwait and the neighbouring Gulf states.

But the keynote in that part of the world has always been service. In the present economic situation how many companies are geared up to provide the quality of service demanded by Middle Eastern clients?

To a lesser extent this also holds true for all our customers and clients in a time of recession. They become more aware of their value to the supplier of the goods and services they invest in and ever more demanding in the deals they negotiate - and these attitudes persists long after the economy has begun to move into a boom phase.

So we come to the moral of the tale - in many respects a twentieth century replay of the wise and foolish virgins. If you, as a manufacturer, have used the slack period to take stock of your product range and updated it to reflect the changing taste in your market; if you have paid increasing attention to delivery periods; if you have enhanced your peripheral services to give the customer a more complete service; then you are in an excellent position to take off fast as the economy begins to move ahead.

If you, as a lighting engineering practice, have taken the opportunities offered by the reduced workload to update and increase your skills - and, as a result, are now able to provide a more comprehensive service to your client - then your investments in time and trouble will begin to pay off.

We, at *LEN* are similarly looking to improve the service we offer the lighting industry and the designers and specifiers who make purchasing decisions on its products. I hope we, equally - within the limits imposed by a tremendously heterogeneous readership - manage to provide something to stimulate, inform and perhaps, along the way, to amuse.

I can, however, safely guarantee that not all items will be of equal interest to every section of our readership. We just hope on balance we get it right.

If we don't please let us know. A magazine always benefits from feedback by its readership and - contrary to all expectations - we do take note of any constructive suggestions made.

So let's look forward to a brighter future together.

LIGHTING EQUIPMENT NEWS

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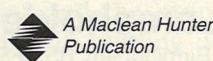
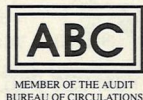
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NEWS

DLA announces future plans

The Decorative Lighting Association's council of management has announced its intentions to develop the organisation into a more effective representative body for its members.

Plans to expand facilities for members, including much strengthened technical services and promotional events, are currently being formulated.

Following last month's death of the director, John Tengwall, the DLA council has taken a number of important decisions regarding the future of the Association.

According to president, Maurice Green, the council is to

develop the services available to members. In particular the association is looking to improve the technical advice and facilities it offers, including marketing advice and retailer training. National promotional activities are also to be expanded, together with concentrating on Lightshow to help it realise its potential.

The DLA council of management has confirmed Graham Samuel as company secretary and his immediate duties will involve Lightshow '92, company law, the DLA in Europe, Home Lighting Month, and the student designer award. Richard Smith becomes

technical and accounts manager.

The council and existing staff will use the next few months to assess the staffing and resourcing of the DLA. Day-to-day management will continue to be the responsibility of Graham Samuel and other key DLA staff, acting in close consultation with Maurice Green, the president-elect Keven Verdun and the honorary treasurer Jeremy Rubin.

Decisions on the appointment of a new director, or deputy director, will be taken only when this assessment is complete and member companies have had a chance to comment.

New European requirements for emergency lighting

BS 4533 : Section 102.22 : 1991 introduces new European requirements for emergency lighting luminaires.

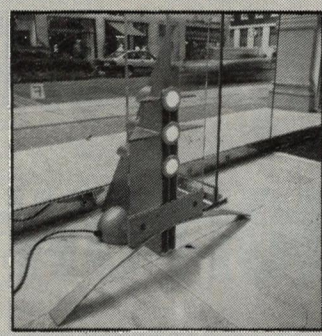
This British Standard covers luminaires for use with tungsten filament, tubular fluorescent and other discharge lamps on emergency power supplies not exceeding 1000 V.

The publication is the English-language version of the European Standard EN 60 598-2-22 : 1990.

The text is based on IEC 598-2-22 : 1990. The text is based on IEC 598-2-22 : 1990, published by the International Electrotechnical Commission, but it also includes a number of common modifications, compiled by CENELEC. These provide further clarification, enable more practical tests and more consistent test results to be achieved, provide requirements for luminaires marked with a supply voltage range — and, in general,

align the text with EC needs. BS 4533 : Section 102.22 : 1991 supersedes the 1981 edition, which is withdrawn. It should be used in conjunction with BS 4533 Luminaires : Part 101 : 1990 Specification for general requirements and tests.

Copies of BS 4533 : Section 102.22 : 1991 are available price £35.40 from BSI Sales, Linford Wood, Milton Keynes MK14 6LE.



Outer space lights inner space! These space age lighting fittings were designed by David Leon and Partners in co-operation with Electrolite for the Bradshaw and Webb car showrooms in Mayfair, London. Although futuristic in appearance they were designed very much with function in mind, to provide low level illumination on the car in their path.

Three of the luminaires are modified to accept 1.8m high acrylic panels which display details of the car being illuminated.

The fittings do not house hard wiring, but use two low voltage bare wires which run from the transformer in the base to the lamps. Lamp changing is by removing the front bezels.

Lighting an ecosystem

Sylvania 160W Gro-Lux and 1000W Super Metalarc lamps are being used as the energy source to sustain plant and animal life in a new exhibit at the Smithsonian Institution National Museum of Natural History in Washington, USA.

The lamps provide each of the exhibit's eight tanks with 8 hours of sunlight in summer and fourteen in winter. According to the museum, "The lamps provide the energy for photosynthesis, so that nearly all food comes indirectly from lamps. We need a high intensity full spectrum light for this purpose, and the Sylvania lamps simulate daylight, supplying most of the energy the system needs."

The display, comprising 8 tanks each 12 feet long and 5 feet wide by 5 feet deep and holding a total of 15 000 gallons of water, is described as a mesocosm of Chesapeake Bay. It is one of four miniature reproductions of natural



marine environments created by the Museum in the last decade as an 'ultimate aquarium' with important benefits to the business, educational and scientific communities.

NEW FROM IMI REEVES

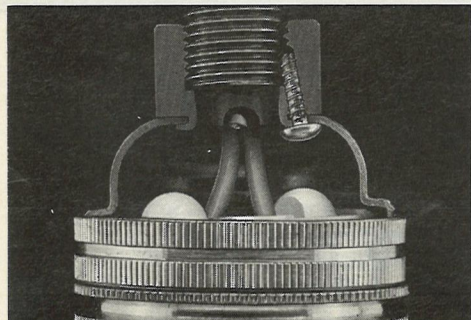
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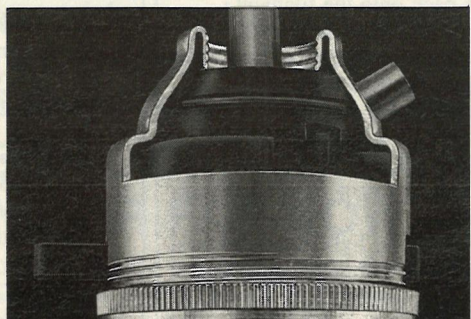
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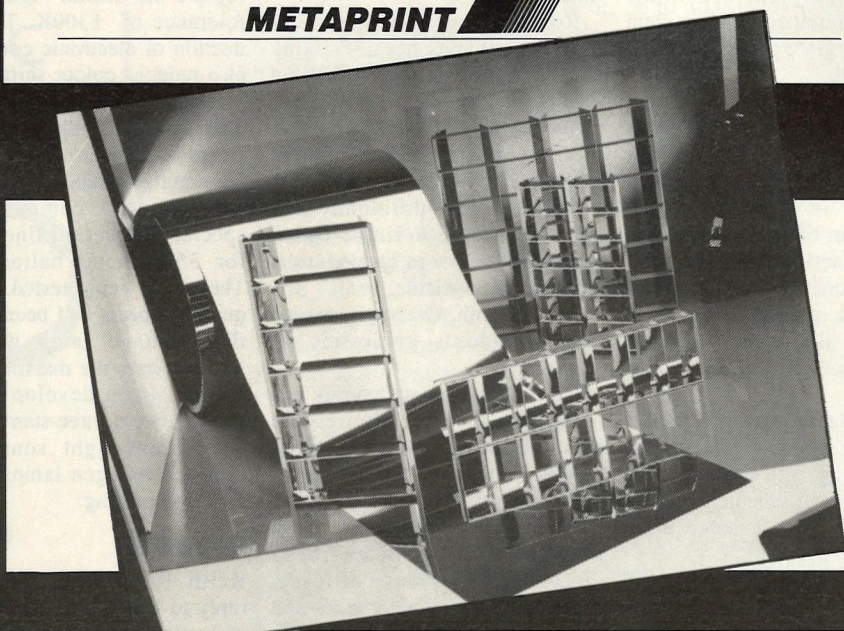
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NEW PRODUCTS



Emergency guidance

Existalite's Guide-Lite system provides linear emergency lighting at or near floor level to define and illuminate escape routes.

It is supplied in kit form consisting of modules of various lengths, connectors, spacers and power supply units. The sub-miniature tungsten lamps are housed in polycarbonate tubing.

The modules containing the lamps are accommodated in floor or wall mounted aluminium extrusions, which can be supplied by Existalite if required. Extrusions can also have a practical

function such as carpet edging, skirting, stair nosing or handrails.

Guide-Lite operates off a 24V central battery system. It can provide 0.2 lux in narrow areas such as corridors. The system complements conventional emergency lighting. In particular, it provides illumination at a low level which is needed if rising smoke in a burning building has obscured emergency lights near the ceiling.

Alternative versions can be used as decorative, flashing or security lighting.

Reader Service No. 151

Freestanding spotlight

A freestanding, low voltage display lighting unit by Hitech Lighting is called Compact Twinspot. It is designed for permanent or temporary lighting of feature areas and window displays.

The unit consists of two cowed spotlights, each suitable for use with dichroic lamps up to 50W, mounted on the housing of a 100VA electronic transformer.

Compact Twinspot has a 2m lead complete with plug and is available in white, black, chromium plated or gold coloured finishes.

A detachable backplate allows the fitting to be surface mounted if required.

Reader Service No. 152

Security light has 180° field

White Sensor Light is a low cost passive infra-red security light with a 180° detection field, from Smiths Industries Environmental Controls.

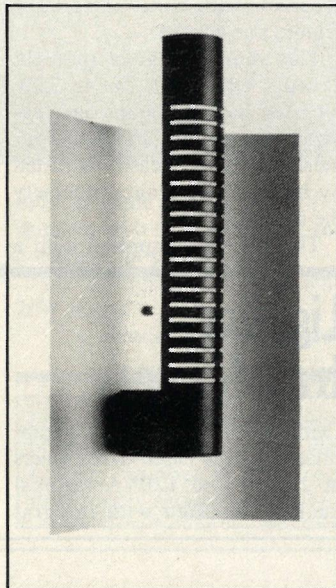
The detection field is also adjustable up to a distance of 10m. A single light placed by the front door can detect a person approaching from any angle. The light then switches on automatically for up to five minutes.

A photocell ensures that the White Sensor Light does not operate during daylight hours.

It is expected to retail at about £30. Reader Service No. 153

Versatile wall lights

A range of wall lights from France, designed to accept PL type compact fluorescent lamps, is available from GFC Lighting.



There are two versions. One has a white, curved, rectangular, steel reflector with a linear, curved cover in either black or grey concealing the 11W lamp.

The other version has a grey reflector with black cover for the 18W or 26W lamp.

Other options are that the lamp cover can have either three small, decorative cut-outs or a series of horizontal slots, while the reflector is reversible to give either a convex or concave shape.

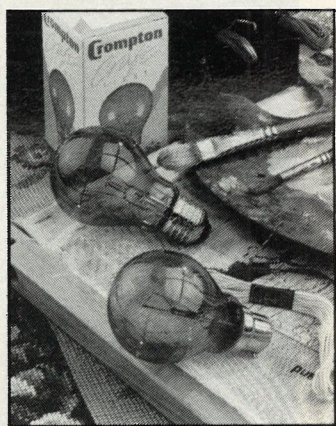
Reader Service No. 154

Low voltage spotlight

A mini version of Hitech's Excel low voltage spotlight has been launched for reception areas and shops, as a feature spotlight or to create a backlighting effect.

Mini Excel is available in black or white and uses a 35mm, 20W or 35W dichroic lamp. It can be supplied with either ceiling plate or track adapter.

Reader Service No. 155



Lamps for intricate work

Craft Light is a range of tungsten lamps from Crompton made to simulate clear, natural daylight and particularly useful for tasks associated with artistry, crafts and hobbies.

A special blue glass results in a white light which provides a high level of contrast and good colour matching. Crompton says that eyestrain, often experienced when performing intricate tasks under normal tungsten lighting, can also be alleviated by using these lamps.

They are available in 60W and 100W ratings with BC or ES caps.

Reader Service No. 156

LIF LINE

A well trained and confident sales force is the best route out of recession

1990 saw more students passing through the LIF Courses than ever before, as the following figures will show:

Certificate Courses	Attended	Certificates awarded
Course 14 (London)	56	46
Course 15 (Birmingham)	50	35
Course 16 (Leeds)	31	24

Advanced Modules	Attended	Passed
Interior lighting (Birmingham)	24	20
Exterior lighting (Birmingham)	22	to be completed
Light measurement (London)	13	to be completed

Among last year's students, a substantial proportion came from outside the manufacturing industry, including the winner of the 1990 Outstanding Student of the Year Award on the certificate course. This underlines the growing importance of lighting design in all sectors — manufacturing, wholesaling, building services, theatre, architecture and interior design — and, as the backgrounds of those now involved with the specification and design of lighting schemes varies greatly, so the need for good basic education in the fundamentals of lighting becomes crucial in order to bridge the professional gap which has been created.

Over the past seven years LIF has sought to find the right formula to meet the varying needs of the industry. At last it seems, from the support we achieved in 1990, we have got the formula right.

For 1991, in addition to the usual course programme of certificate and advanced courses in Birmingham, Leeds and London, a further module is being considered for those interested in the aesthetic appearance of lighting schemes, the use of low voltage and mains voltage display lighting and co-operation with architects and interior designers.

However, the recession is resulting in an immediate dramatic reduction in money spent on training and education. The effect is felt at all levels, but the short courses are the immediate victims. There was a small drop in the recent London course down to 42, the present Birmingham based course is down to 25, and interest in later courses is sluggish.

The implications are obvious. If, as is happening, demand drops, the LIF courses must be trimmed back or even withdrawn. Is this what we have been aiming for over the last few years, particularly since adequate lighting training is already sadly deficient for today's engineers and design specialists?

The lighting industry needs training courses and if the support is there and the course meets that need, then it will flourish. Withdraw the support and it will die.

As in the early 1980s, the industry has reached a position where it is losing lighting engineers without replacing them. So industry must ask itself whether, when times are hard, curtailing training is either sensible or, in the long term, the correct policy.

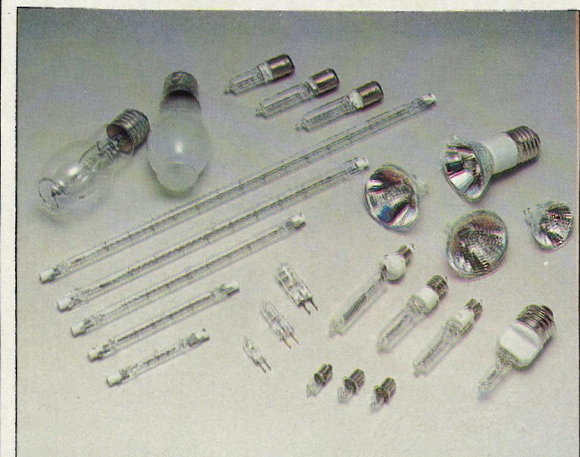
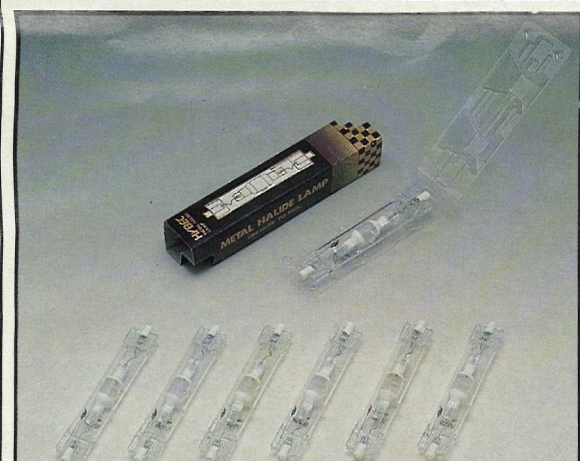
Education and training should be seen as a long term investment which, in these days of doom and gloom, could prove the determining factor for continued success in the market place.

As British contenders in the developing European market it is also essential that we invest in education to match the high level of training and professionalism of our counterparts on the continent.

Training should, therefore, continue to be given the high priority it deserves to maintain and, indeed, encourage the development of the industry.

The next certificate course No. 19 is scheduled to begin on 30 April in Leeds depending on demand. The next advanced module on interior lighting begins in May at Aston University.

For further details of the certificate and advanced courses throughout the year and the proposed 2-day lighting seminar on aesthetics in lighting design, contact David Pritchard on 06285 22669 or Siobhan Dowsey at LIF on 081-675 5432.



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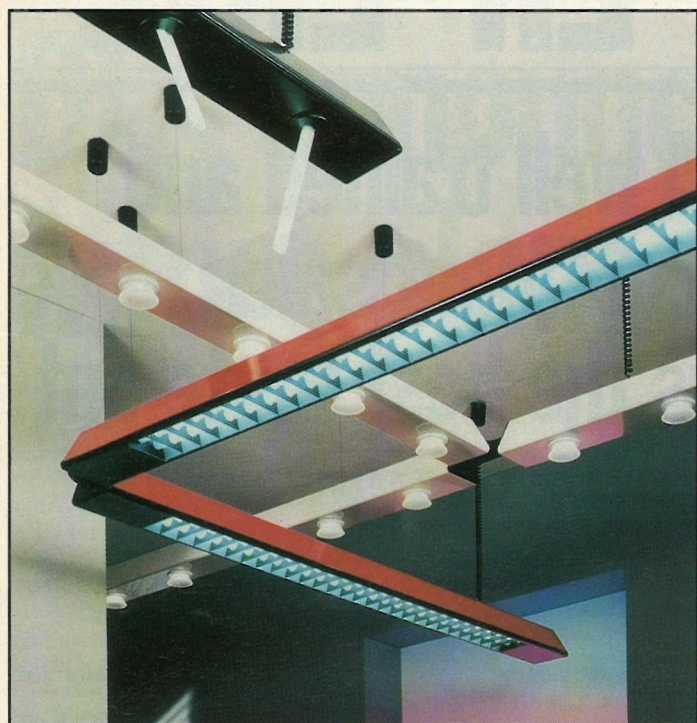
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Reader Service No. 5

NEW PRODUCTS



Linear lighting system

Menvier Linear Lighting has introduced the first of its range of linear lighting products.

Designed for either ceiling or wall mounting, Triaga 2 has a triangular profile. The wide 135mm x 103mm base accommodates twin lampways for areas where higher lux levels are required. It can be specified in two additional configurations to use either low voltage capsule lamps or PL compact fluorescent lamps.

Flexibility in scheme design is provided by a range of joints, spacers, connectors, infill modules and suspension wires. Units can be connected to one another at various angles to take account of room shape and position of work stations.

Triaga 2 uses 18W, 36W or

58W fluorescent lamps above black metal, perforated louvers. The low voltage option uses three, five or six lamps, rated at 50W, in Pyrex reflectors and is complete with transformer. The compact fluorescent module has three, five or six lamps which can be placed at pre-determined angles to create eye-catching effects.

High frequency ballasts can be specified. In addition, all the fluorescent luminaires can be supplied with factory-fitted emergency conversion kits in an adjacent dummy module.

The system is available ex-stock in red and white, with lead times for other RAL colours of six to eight weeks.

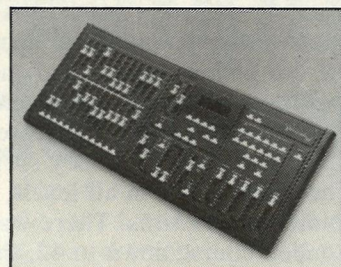
Reader Service No. 157

Lighting board for smaller venues

A versatile lighting control board for smaller entertainment venues, such as clubs, pubs, studios and theatres, has been launched by Strand Lighting.

The MX range is designed to be simple to operate and capable of being used throughout the world by operators with varying levels of experience. It blends both manual and memory controls and software is included.

It offers up to 48 channels of two-scene preset faders, electronic patching for up to 512 dimmers, allows rapid recording of up to 192 memories in four



pages and has 24 real time programmable effects.

One of the biggest boons for the "small band" level of use is that a MIDI interface allows the playback of lighting states and effects from musical instruments. This enables performers to pre-set their own lighting without a lighting operator.

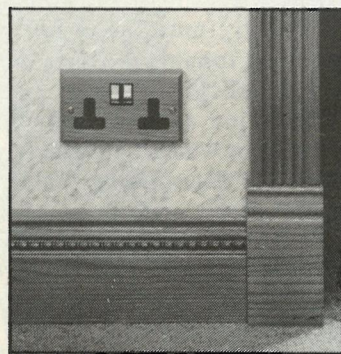
Reader Service No. 158

Wooden fronts for accessories

Switches, dimmers and sockets with solid wood front plates are available from Winther Browne.

Offered in ash, oak, (natural, golden or dark), mahogany, iroko, teak and padauk, the natural grain of the timber is highlighted and protected with a satin lacquer finish.

Reader Service No. 159



Speedy fixing for exit sign

An illuminated exit sign designed for speedier installation has been introduced by Mattalex. It has a sliding 'exit' panel, fewer fixing points for back box and gear tray, and a plug-and-socket power system.

The company claims that the unit can be installed at twice the speed of conventional exit signs.

Reader Service No. 160

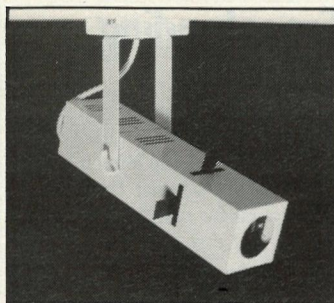
For more information on any of the products listed, circle the enquiry number on the free reader reply service card.

Spotlight with magnetic shutter

A framing spotlight from Lee Environmental Lighting is intended for dramatic lighting schemes, with either integral or remote transformer.

This slim rectangular spotlight accepts either 20, 50 or 75W tungsten halogen lamps and features a magnetic shutter. Four metal screens are easily adjusted by hand to illuminate precisely the area to be lit.

The fitting is supplied with a



yoke for track or rod use and can also be provided with a ceiling mounting plate.

Finishes are either black or white, or two-tone white and gold, or black and chromium.

Reader Service No. 161

Lighting transformers

Clairtronic has three fully encapsulated, plastic cased transformers in 20, 60 and 120VA ratings. Each is supplied with integral

input and output cables. Input windings are fused by easily removable cartridge fuses.

This robust, economical range of conveniently sized transformers is suitable for mounting in remote locations. Four integral plastic feet facilitate permanent fixing. **Reader Service No. 162**

Spotlight has unusual design

Decospot is a low voltage spotlight in an innovative design introduced by Osram.

It accepts either 50W or 75W tungsten halogen reflector lamps and has a built-in electronic transformer.

Ceiling, track and table versions are available in either black

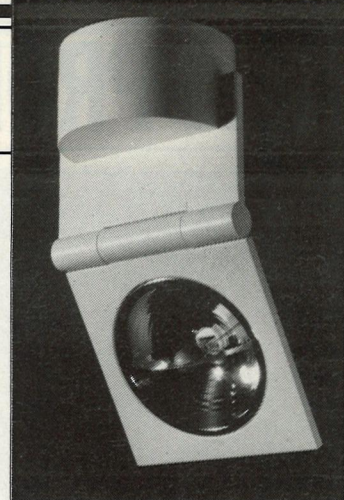
or white.

Reader Service No. 163

containing an integral toroidal transformer and lampholder, into which is fitted a tungsten halogen dichroic reflector lamp. Narrow, medium and wide beam versions are available.

The LV PAR35 model is supplied with a 35W lamp and the LV PAR50 with a 50W lamp, both have a removable lens. The one-piece LV RO80 accepts a 20W lamp.

Reader Service No. 164



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Programmable spotlight

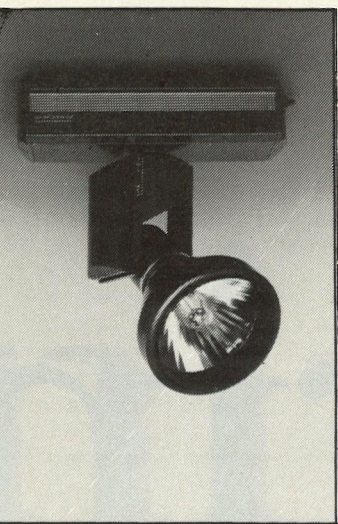
sequence of movements and switching to be programmed into its memory.

One advantage of this is that the infra-red control will operate through glass, so a spotlight in a shop window, for example, can be programmed from the street.

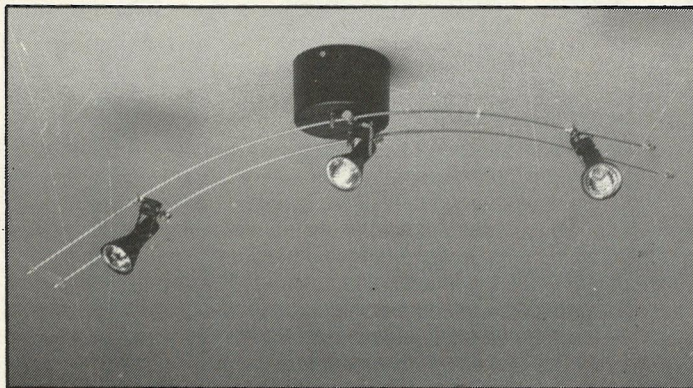
This electronic spotlight can be adjusted vertically, rotated horizontally and set to flash or dim. There is also a speed control. Up to 25 actions can be programmed into the memory, which repeats the sequence automatically. It accepts either low voltage dichroic, low voltage capsule, or single-ended 150W mains tungsten halogen lamps.

Other, non-programmable, spotlights in the range additionally use White SON and metal halide lamps.

Reader Service No. 165



Star of the Orchestra range of spotlights introduced by Philips is a version controlled by an infra-red handset that allows a



Decorative halogen range

Trapezium is a range of decorative, low voltage, tungsten halogen lighting from Firstlight Products. Each model incorporates a transformer and power is supplied to the lamps along chromium plated rods.

There are ceiling or wall mounted versions using single,

twin or triple spotlights, a floor standard with twin spotlights, and a single-light table lamp.

The fittings are supplied with 20W lamps.

Reader Service No. 166

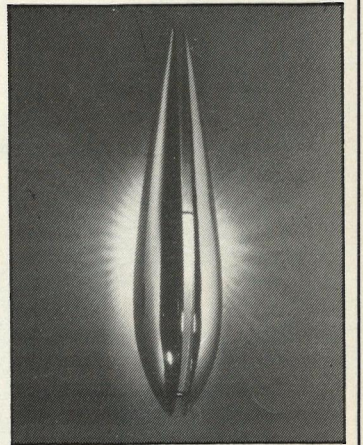
For more information on any of the products listed, circle the enquiry number on the free reader reply service card.

Wall light in modern style

America Cup is the name of a wall light from Myddleton Hall Lighting. This modern light with a nautical flavour uses a 75W mains voltage tungsten halogen lamp.

There is a choice of two finishes for the cast aluminium housing: either natural polished or lacquered dark grey. The diffuser is opal glass.

Reader Service No. 167

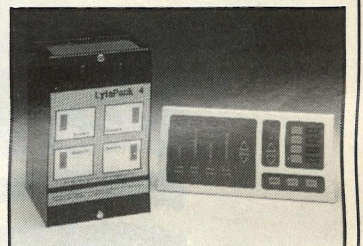


Lighting control for restaurants

Lytemode has introduced a low cost lighting control system for restaurants and small hotels.

It is based on a standard, full function Lytemaster controller coupled to a new four-channel dimmer offering 5A per channel for mains or low voltage tungsten halogen lighting.

This package is compatible with all other products in the Lytemode architectural range,



allowing future expansion or upgrading.

Price for the basic system is £769. **Reader Service No. 170**

Decorative finish on lamps

Cristaleis has a range of E27 cap tungsten lamps with decorative glass envelopes, made in Germany. There are 40W and 60W globe shapes and 25W, 40W and 60W candle lamps. Quoted life is 2000hr.

The five, non-fade finishes are: coral ice, moonstone, crystal ice, gold coral ice, and gold.

As sole UK distributors for Merkur, the company is also able to supply decorated glass envelopes to lamp manufacturers.

Reader Service No. 171

Pleats and fruit on table lamps

A rich mix of colours is offered in Cresswell's latest ranges of table lamps.

The Autumn Fruits collection (illustrated) includes glazed ceramic bases in twisted candle-



stick and urn shapes. Hard pleated shades are decorated with vibrant fruit and flower designs.

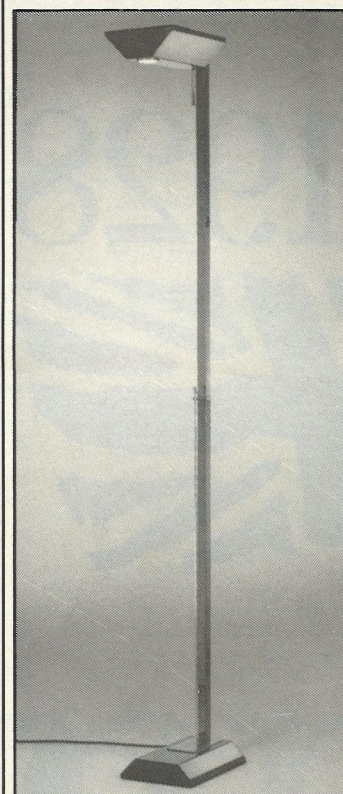
Reader Service No. 172

Garden lighting sets

Two low voltage garden lighting kits, which can be used to create dramatic effects in flower beds or as amenity lighting, have been introduced by Tamlite.

They consist of either four lanterns with removable louvres, or four floodlights plus four coloured lens covers. Each kit also contains a plug-in transformer complete with timer to automatically switch the system on and off, circuit breaker and 30.5m of low voltage cable.

Reader Service No. 168



Unusual control on floor light

A brass, floor standing uplight from Deknudt, Belgium, has an unusual dimmer switch. The light is controlled by twisting a vertical rod that stands in front of the supporting stem of the luminaire.

In addition to the upward light, a low voltage spotlight is set into the reflector to give downward light on a table, chair or other object in front of the floor standard.

Reader Service No. 169

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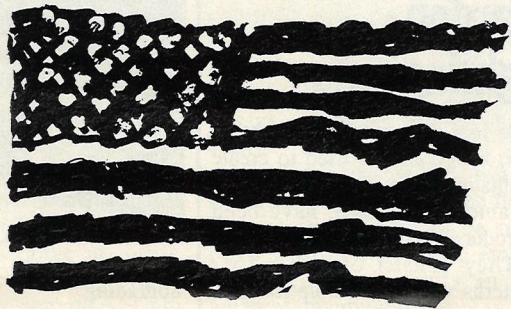
International Marketing Department
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Reader Service No. 6

In the begin

in 1879



independently of each other, Joseph Wilson Swan in Newcastle and Thomas Alva Edison in Menlo Park, New Jersey, demonstrate their new invention: The Electric Incandescent Lamp.

Much work remains to make the Incandescent Lamp burn brighter and last longer. For this task a new industry is necessary: Swan forms the Swan Electric Lamp Company and is later joined by Edison in what is still remembered as 'Ediswan.' In the USA Edison's own company is merged to create the General Electric* Co.

Later General Electric establishes the centre for all its lighting activities at Nela Park, Cleveland, Ohio, which becomes the birthplace of many inventions and amongst its countless Firsts are: *the coiled coil filament; the fluorescent lamp; the double ended halogen lamp; the high pressure sodium and the multi-vapour metal halide lamps...*

in 1928



THORN is founded and begins its progress towards becoming a major world source of lighting products. In 1964 THORN acquires the Ediswan name and this symbolic connection with the inventor of the electric lamp is demonstrated by some of THORN's own FIRSTS:

to mass produce fluorescent tubes in Europe and develop new phosphors and improved cathodes; the dip-beam tungsten halogen headlamp for cars; the 2D compact fluorescent lamp; the single ended halogen lamp.

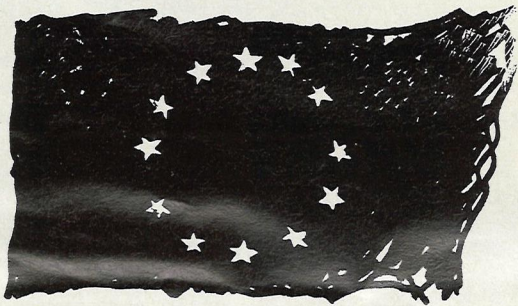
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Upper Floor Ground Floor

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in 1991

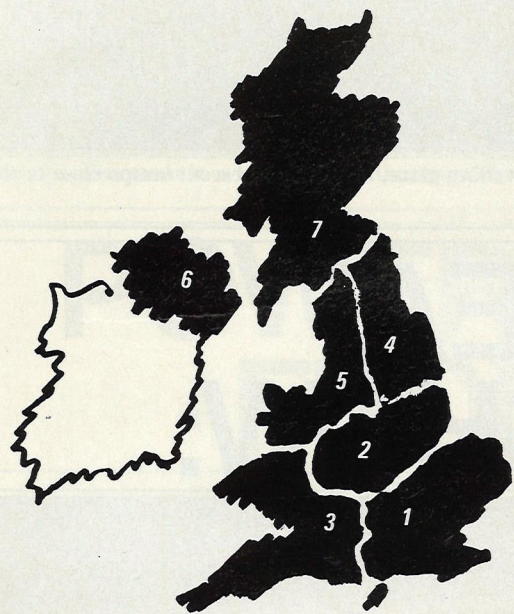


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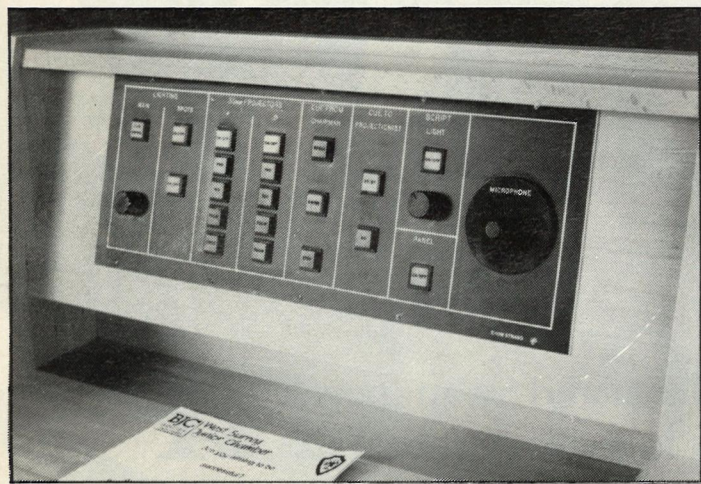
*GE Thorn Lamps Limited is affiliated with General Electric Company USA and is not connected with the English Company of a similar name.



GE Thorn
A genius for light

Lighting conference and teaching areas

New guidelines on lighting areas such as conference rooms, lecture theatres and teaching rooms will shortly be available. *Lighting Equipment News* takes an advance look at the document and says very few modern conference rooms meet the basic lighting requirements.



Lighting, projector and cue controls clearly marked in words at a speaker's lectern.

In a few weeks a new Lighting Guide, *The visual environment in lecture, teaching and conference rooms* will be published by the Chartered Institution of Building Services Engineers. It covers a wide field, from multi-purpose rooms to committee rooms and adjoining spaces such as ante rooms.

As the previous recommendations are dated 1973, it was time to take a new look at this subject because of technical progress in lighting in the meantime.

In addition, many areas have been included that were not tackled in the earlier publication and advice has also been given on visual problems that may arise. Useful check lists are included for lighting designers at the end of each chapter.

In the case of teaching rooms, lecture theatres and multi-purpose rooms used for conferences it is arguably even more important than with other building types that the architect and lighting engineer pool their ideas from the beginning of the planning process. At a later stage, because of the special requirements of such rooms, architecturally and from a lighting point of view, it may be too late to achieve a lighting installation that is satisfactory for both the audience and the lecturer.

As well as being indispensable to lighting engineers, lighting designers and architects, the guide contains useful information for lecturers and should also be among the reference books of conference organisers who hire rooms and sometimes need to hire additional lighting for their events.

The first requirement of a lecture space where people come together for the purpose of teaching or discussion is that the audience and the speaker should be able to see each other easily.

Very few conference rooms, even the most modern, meet this basic requirement. For this reason alone, the new guide ought to be a best seller running to many editions.

Lecture theatres and rooms

The guide points out that in addition to lighting for the audience and demonstration areas in lecture theatres (with raked seating) and lecture rooms (with basically flat floors), lighting is needed for visual tasks such as reading chalkboards, observing demonstrations and taking notes. It should be remembered that note taking has to continue while slides or films are being shown.

In providing lighting for the audience area in lecture theatres

care should be taken to position luminaires so that they do not create glare either for the audience or the speaker.

A warning is given that if tungsten lighting is used, downlights should be avoided because they give poor modelling of people's faces.

When fluorescent lighting is used, luminaires should be mounted with the long axis parallel to the rows of seats to avoid shadows of the pen when note taking.

In small lecture theatres and those with an unbroken horizontal ceiling it is a good plan to carry the general lighting forward to serve the whole area and add incandescent lighting for the demonstration area, the guide states. In larger theatres, luminaires designed for stage lighting may be used, but in any case should be concealed from audience view.

The best angle for spotlights, illuminance for table top demonstrations and detailed advice about lighting the lecturer's notes are all given.

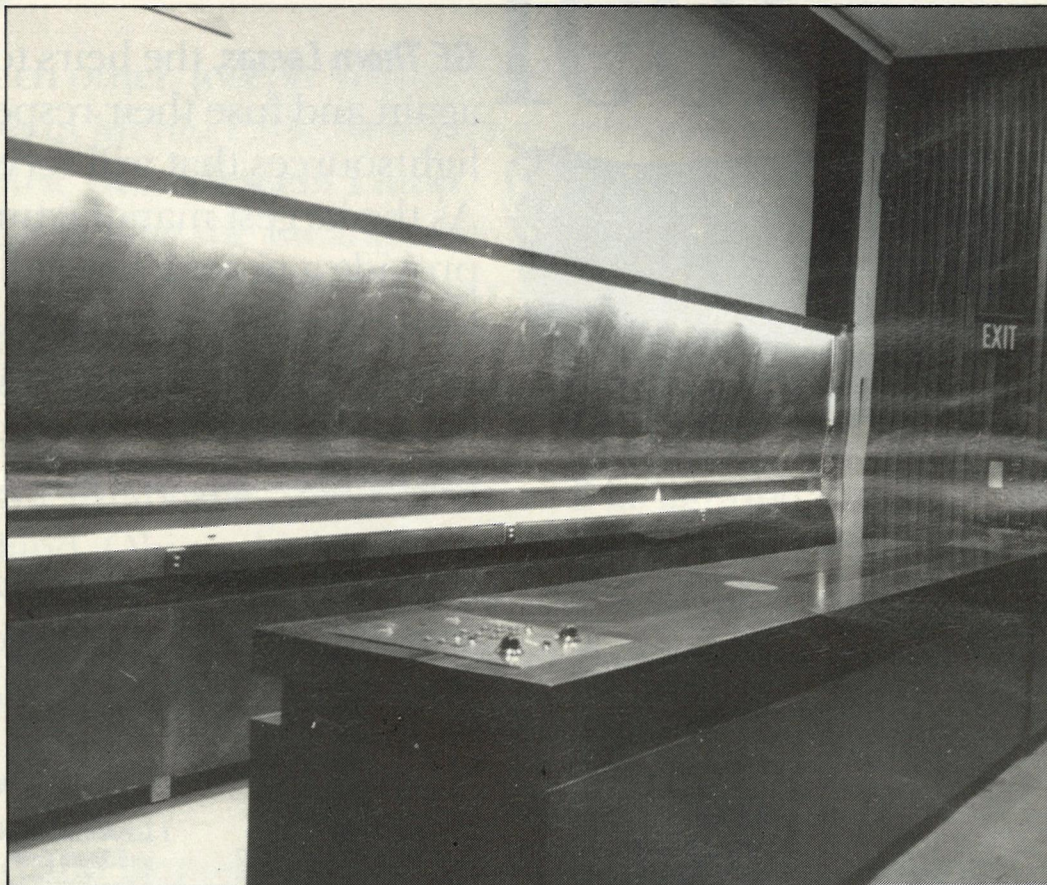
In lecture rooms, the audience area lighting usually serves the demonstration area as well, but the lecturer and immediate surroundings should be a little brighter. This can be achieved with a few carefully positioned spotlights.

Ideally the lighting should be dimmable to about 15-30 lux to allow notes to be taken while slides or overhead projector transparencies are shown.

A section on chalkboards covers different surfaces, colours and mounting, as well as lighting,

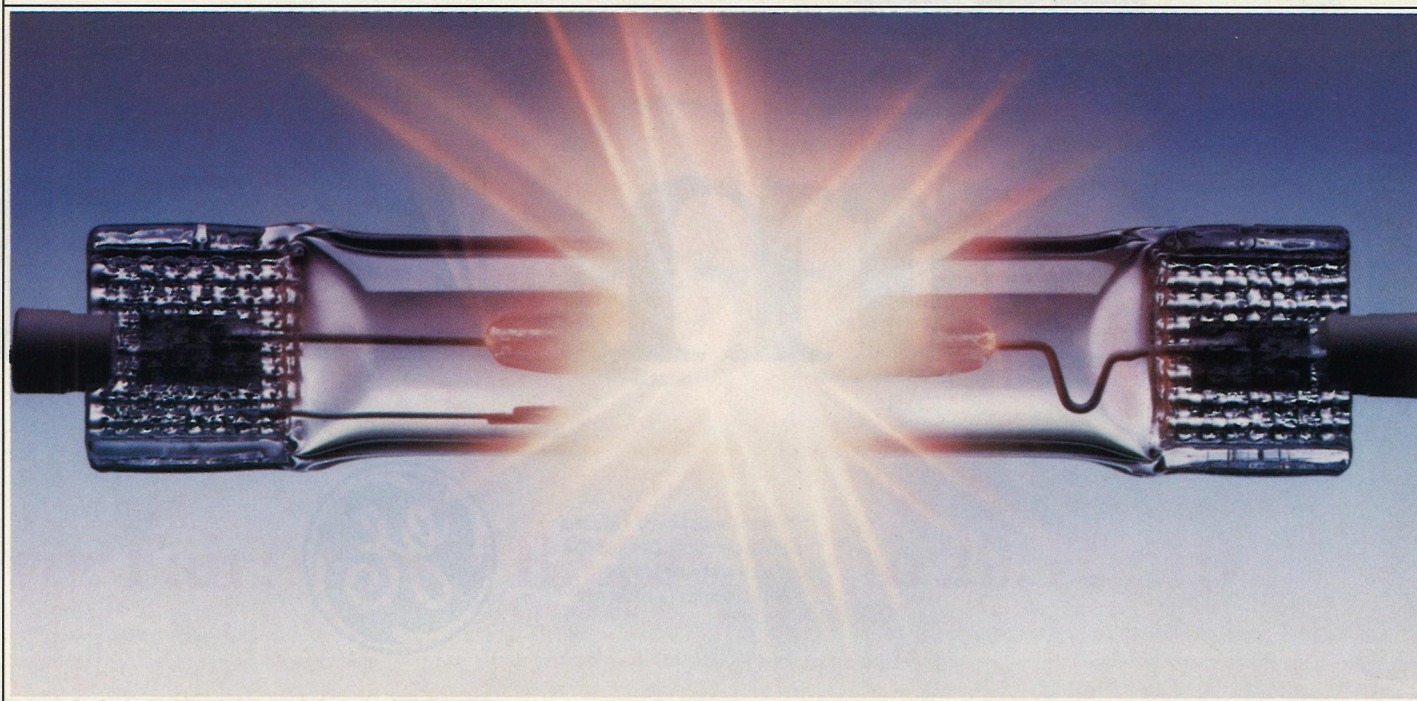


Wall and ceiling textures, the colour scheme and the lighting combine to create a warm, welcoming atmosphere in the chemistry department lecture theatre at Nottingham University.

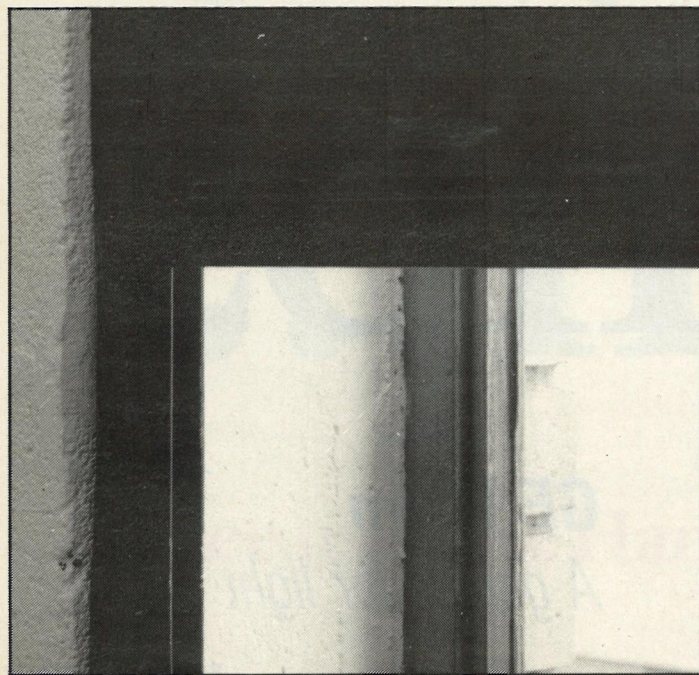


How not to light a chalkboard: not only is there veiling glare, but the fluorescent lamps close to the top edge do not light the foot of the board.

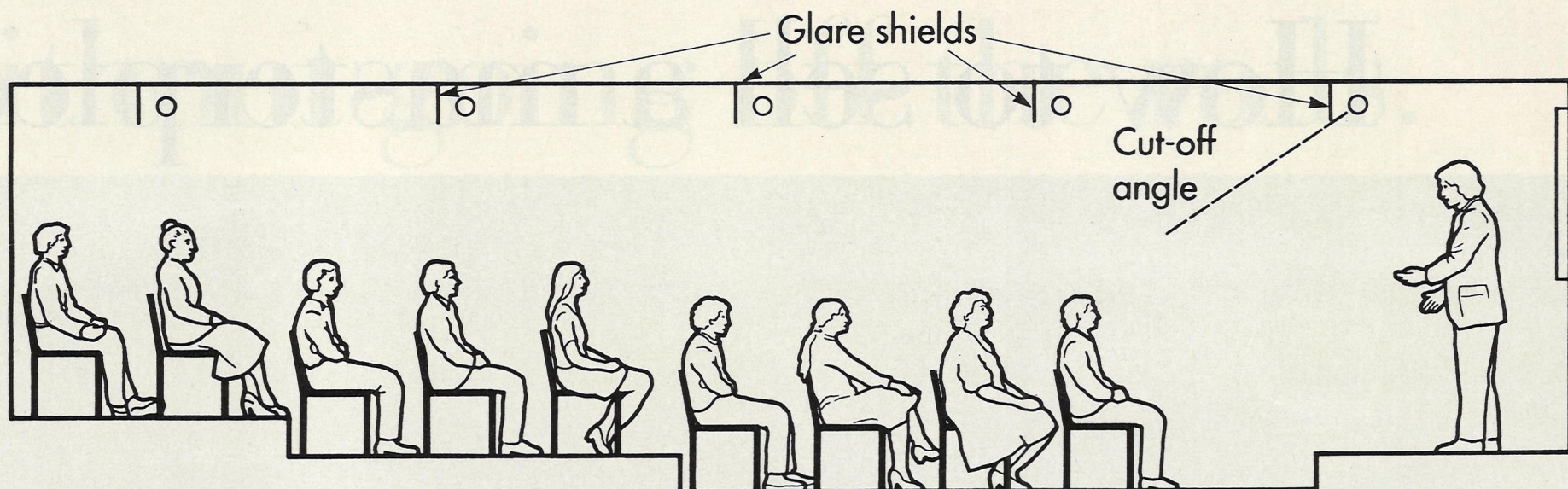
THE GREAT POWER SHOW:



3.16 GB



Groove-enclosed blinds give the most satisfactory blackout.



A lecture room: glare is eliminated for those in the back row by use of glare shields in front of the lamps.

which should be designed to avoid veiling reflections and light right down to the foot of the board.

In discussing the provision of daylight, the problem of blacking out rooms to show slides, etc, is considered. The guide recommends completely opaque blinds in a light colour, running in grooves at the slides of the windows as the only adequate answer. Curtains or Venetian

blinds are not adequate, it states.

The section on decoration and furnishings reminds readers that co-ordination of colour and texture with the lighting is all-important.

A plea is made for simple, comprehensible lighting controls, especially those intended to be operated by the speaker.

Teaching rooms

The chapter on teaching rooms

divides these areas into three categories: formal instruction, interactive learning and practical work such as metalwork.

Detailed lighting requirements are considered and references made to both daylight and Department of Education and Science guidelines.

Designers are reminded that VDU screens may be found in a variety of teaching areas and if they are used frequently the light-

ing should comply with CIBSE Lighting Guide 3.

Large conference rooms

Because of the varied use of large conference rooms, lighting needs are similar to those of lecture theatres.

Lighting must provide adequate illumination for reading or taking notes at any point, good but not excessive modelling, and good colour rendering.

It must also be flexible and controllable from a single point, be absolutely silent and not produce thermal discomfort.

Complete blackout facilities are needed and an adequate power supply if the room will be used for lecture demonstrations.

Provision should be made for theatrical presentations by allowing plenty of circuits and socket outlets for easy rigging of additional lighting equipment.

Unlike requirements in lecture theatres, people in conference audiences need to be able to see each other easily. For this reason downlights should not be used.

On the question of lighting simultaneous interpretation booths, unlike the detailed advice in the rest of the guide, there is simply a mention of an international standard and a warning that light from such booths should not spill onto the projection screen. Some general advice would have been more helpful, if only a caution to avoid heat-producing tung-

sten lamps, or alternatively information in an appendix, or at least an address where the standard could be ordered.

Committee rooms

Natural and artificial lighting of committee rooms is covered. The basic function of the lighting is to enable committee members to see each other clearly without glare, to read their papers, make notes, and see wall mounted displays.

It is recommended that luminaires should be unobtrusive and that the geometry of the lighting should correspond to the geometry of the committee table, defining it as the focus of activity. Downlights, the guide states, are not suitable as they cast harsh shadows and generate shiny reflections in the table top.

Other recommendations given include illuminance on the table top, vector/scalar ratio and lighting of wall charts.

Multi-purpose rooms

It is suggested that first a list be made of uses envisaged for a multi-purpose room, in order of priority. The prime lighting needs for each activity can then be tabulated to see if any common pattern exists.

In many cases, however, no pattern will emerge and the lighting design will have to be a compromise.

Basic points to be considered next are that daylight should preferably be excluded, chandeliers are not recommended as they can obstruct sightlines and spotlight beams, and if there is a definable stage area then stage lighting should be provided in the room.

General lighting should produce an overall uniform illuminance of acceptable colour rendering, which is free from glare and capable of being dimmed. Advice is given on how to

achieve this and on facilities needed for specific events.

Spaces adjoining conference and teaching rooms should have lighting designed in parallel with the room they serve, though not necessarily in the same style.

Among the requirements of the lighting are that it should put the audience in an appropriate frame of mind for the event they are attending. In some cases, especially ante rooms, a social atmosphere should be created.

The guide also gives advice on circulation areas and stairways.

There are chapters on emergency lighting, maintenance and the management of lecture and conference spaces.

Projection rooms and communication between lecturer and projectionist are among the topics dealt with in the chapter on management. It is best, the guide states, if all lighting controls can be operated by the lecturer — but the controls must be clearly marked.

Extra information

Detailed information on the preparation and use of slides and overhead projection transparencies is given in appendix 1 to assist lecturers in obtaining the best results.

Appendix 2 discusses dimming systems and equipment.

Additional provisions for theatrical presentations in lecture theatres and conference rooms are the subject of appendix 3. These are grouped under two headings: for the audience area and for the stage area.

The task group that wrote the guide is to be congratulated on its comprehensive treatment of the subject and associated matters. This review has only touched on the main theme of it.

Copies will be available by early May from CIBSE, 222 Balham High Road, London SW12 9BS.



A projection room in a large lecture theatre at Surrey University.

POWERSTAR HQI-TS FROM OSRAM.

A lamp only 114 mm long and 20 mm wide, yet with a light output and colour brilliance that puts many larger lamps in the shade.

Its warm white or intermediate colour appearance provides extraordinary flexibility of application, whether for surface or area lighting: for use in offices, conference halls, museums or pro-

duction areas; or in parks, pedestrian precincts and for floodlighting façades.

Plus eye-catching displays in showrooms, shop windows and exhibitions.

And, for sheer economy it steals the show from other lamp types. One single HQI-TS 150 watt can replace eight 120 watt tungsten PAR lamps. It uses 80% less energy and lasts three times as long.

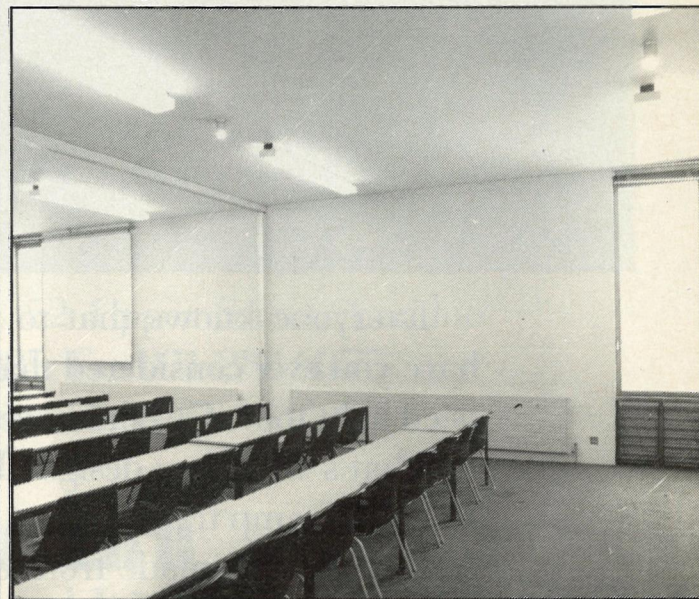
TECHNOLOGY
BROUGHT TO LIGHT

OSRAM

Type	Lamp wattage	Length mm	Diameter mm
HQI-TS 70	75	114,2	20
HQI-TS 150	150	132	23
HQI-TS 250	250	163	25

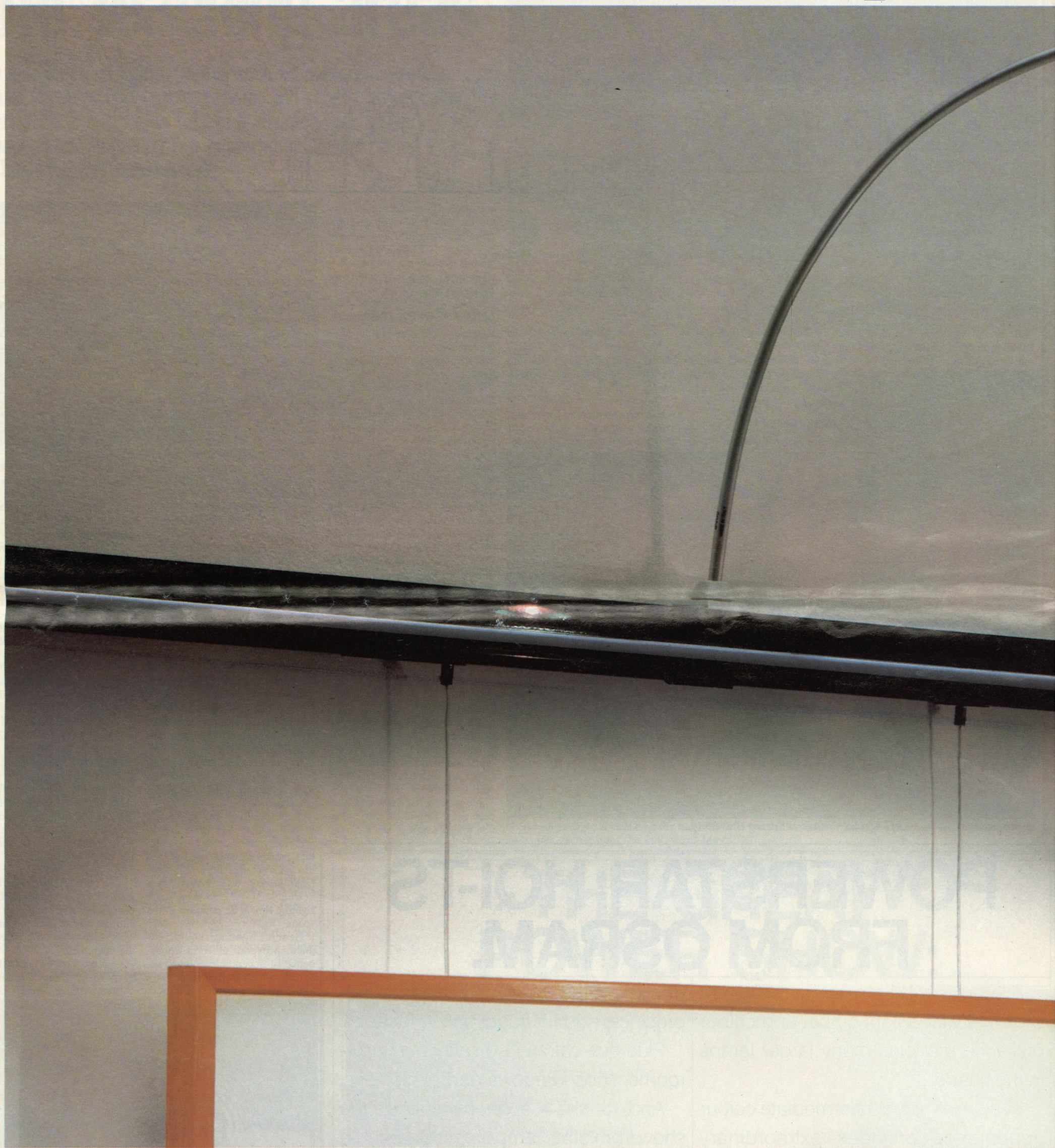
OSRAM Limited, PO Box 17, East Lane, Wembley, Middlesex HA9 7PG

Reader Service No. 8



Daylight is controlled in this teaching room at Surrey University. Windows are designed to provide "visual escape" only.

How to sell a masterpiece



Everyone knows that to paint you need light. But have you ever considered that, to sell paintings, dealers need light too? iGuzzini have.

That's why they designed Limelight, a low voltage, 12 volt 25 amp track.

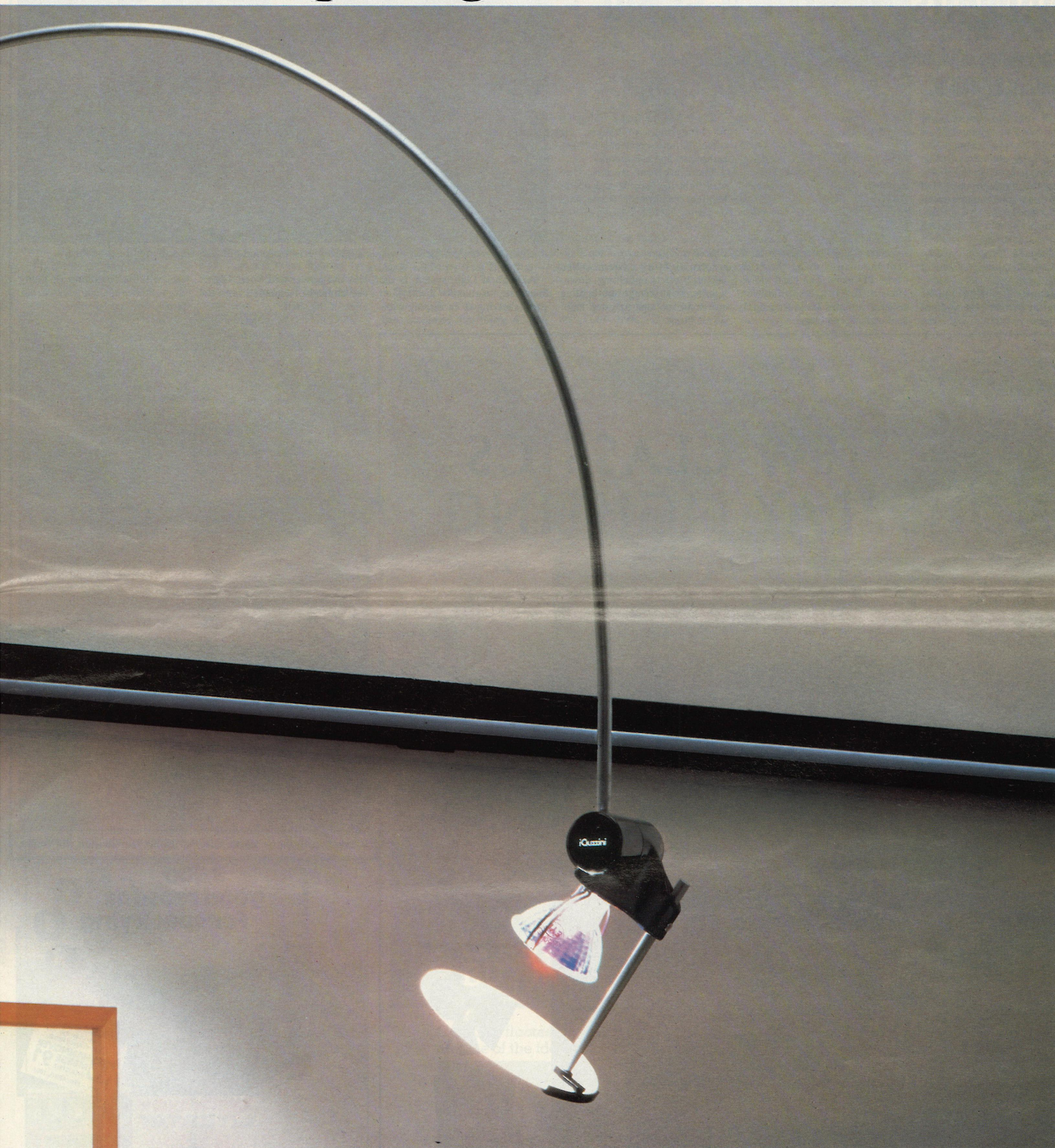
Limelight is made from die-cast aluminium and is very narrow indeed. But wide enough to fit a whole

series of floodlights: Zoom (a spot with coloured filters and barn doors), Wing (fitted with a 50 watt halogen lamp), Focus and Disc (fitted with dichroic lamps).

They all use straight or curved rod suspensions of varying lengths and a patented multidirectional mechanical and electrical connector.

This allows you to swivel the lights horizontally

without going off the rails.



then vertically without having to lock them in their new position.

The Limelight track is designed to be fitted both to ceilings and to walls. In the latter the tracks can also support paintings and showcases.

For information about the whole collection, write to: iGuzzini Illuminazione U.K. Ltd., Unit 310-311,

Business Design Centre, 52 Upper Street, London N1 0QH, Tel. 071-288 6025, Fax 071-288 6057.

Bidding starts right away.

iGuzzini
Architectural Lighting

Reader Service No. 9

Hanover '91

Highlights of British stand

LEN previews equipment to be shown by British exhibitors in Hall 9.

This year the World Light Show at the Hanover Fair will take place from 10-17 April. A number of British companies will exhibit as a group on the ground floor of Hall 9 as part of a joint venture sponsored by the Lighting Industry Federation and the Decorative Lighting Association.

Emphasis is placed on new products in the following preview.

Anglepoise Lighting will be showing the second generation of its emergency uplight, Quad. The

emergency module is now available with a test button.

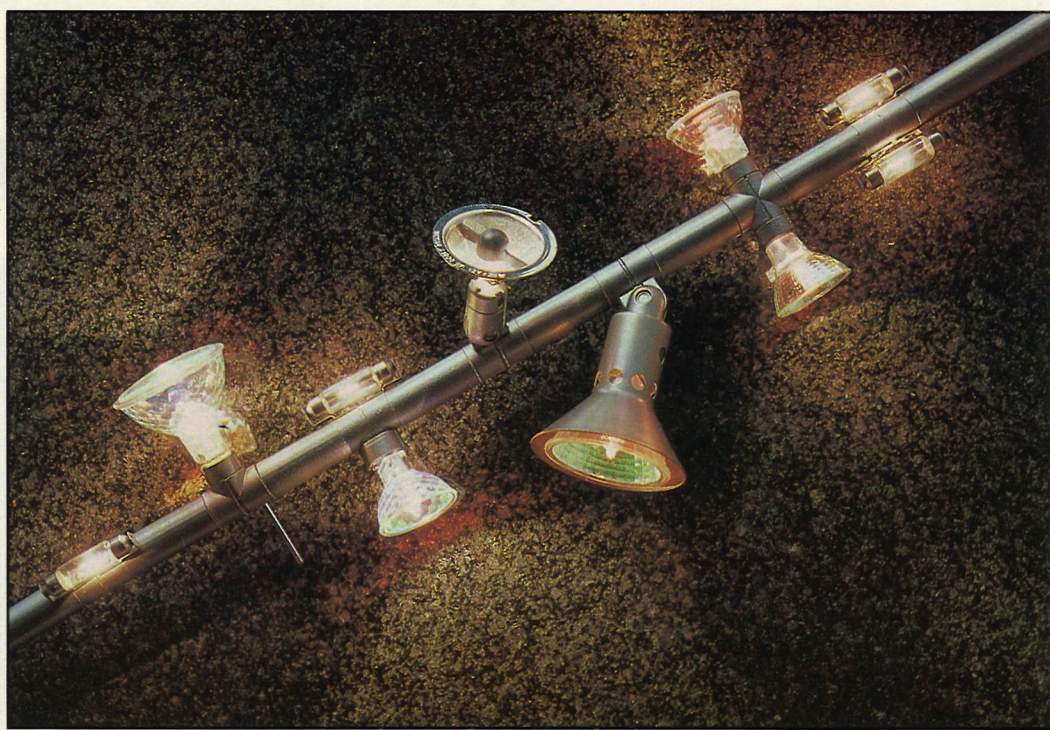
As well as the complete Quad range of floor, wall, ceiling, screen mounted, desk and filing cabinet mounted luminaires, Anglepoise will exhibit its full range of fluorescent and tungsten halogen task lights.

Axis Lighting will launch a range of stylish, compact fluorescent luminaires using the 10W Thorn 2D lamp. The hand blown glass diffusers are available in several finishes including opal, acid etched, and clear.

The 10 Collection is intended for long hours of use in, for example, hotel corridors, lobbies, bathrooms and cloakrooms.

There are four models: Uno wall light for bedside and mirror lighting, the dramatic Trenta, wall or ceiling mounted Decimo, and recessed Decimo.

Another new product will be a British designed and made fluorescent lighting system called Sector. It offers uplighting, downlighting, low voltage spotlighting and mains voltage tungsten halogen lighting.



Euclid low voltage system by Axis Lighting uses tungsten halogen capsule and festoon lamps.

Axis Shelf Light system is the latest way to enhance displays on glass shelving or in display cabinets. A wafer thin conductor car-

ries the power and Shelf Lights are clipped or clamped onto the edge of the shelf.

The Euclid low voltage lighting system has been expanded. It uses miniature dichroic, capsule and festoon lights supported on a 16mm diameter tube.

The system now includes over 60 components to enable it to be used more effectively in cabinet lighting as well as in general display lighting.

BC Metalcrafts' lighting consists of antiques, such as French marble and porcelain lamps, that

are suitable for damp or dusty atmospheres, including car parks, farms and food factories.

Chevin, surface mounted fluorescent luminaire with a one-piece rolled and formed housing, will be displayed. It has F mark approval.

Two new lamps will be shown: Craft Light, which gives an output designed to simulate daylight, and LV PAR, energy saving units to replace PAR38 reflector lamps.

The aim of the Elf system from **Fitzgerald Lighting** is to improve the quality of light produced by fluorescent tubes and save on electricity consumption.

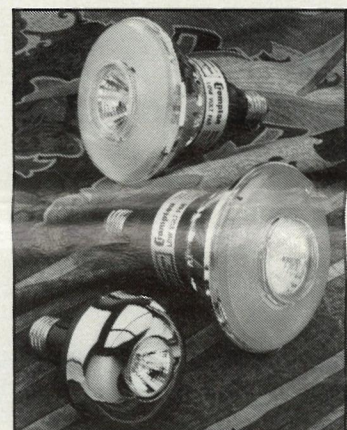
The system consists of an electronic ballast installed in the fluorescent fitting, a central control unit which can regulate up to 100 luminaires simultaneously, and a light sensor.

The control unit regulates the electronic ballast, maintaining the lighting in the controlled area at a chosen level. The unit continuously monitors and regulates the lighting level.

R Hamilton's Mercury Litestat lighting control systems will be on show. Infra-red control has been added to the pre-set and momentary control options.

Units are available in 1kW, 2.5kW and 5kW ratings. They can be supplied to operate on different voltages. Front plates are available to match other electrical accessories in commercial and domestic installations.

Home Automation will launch

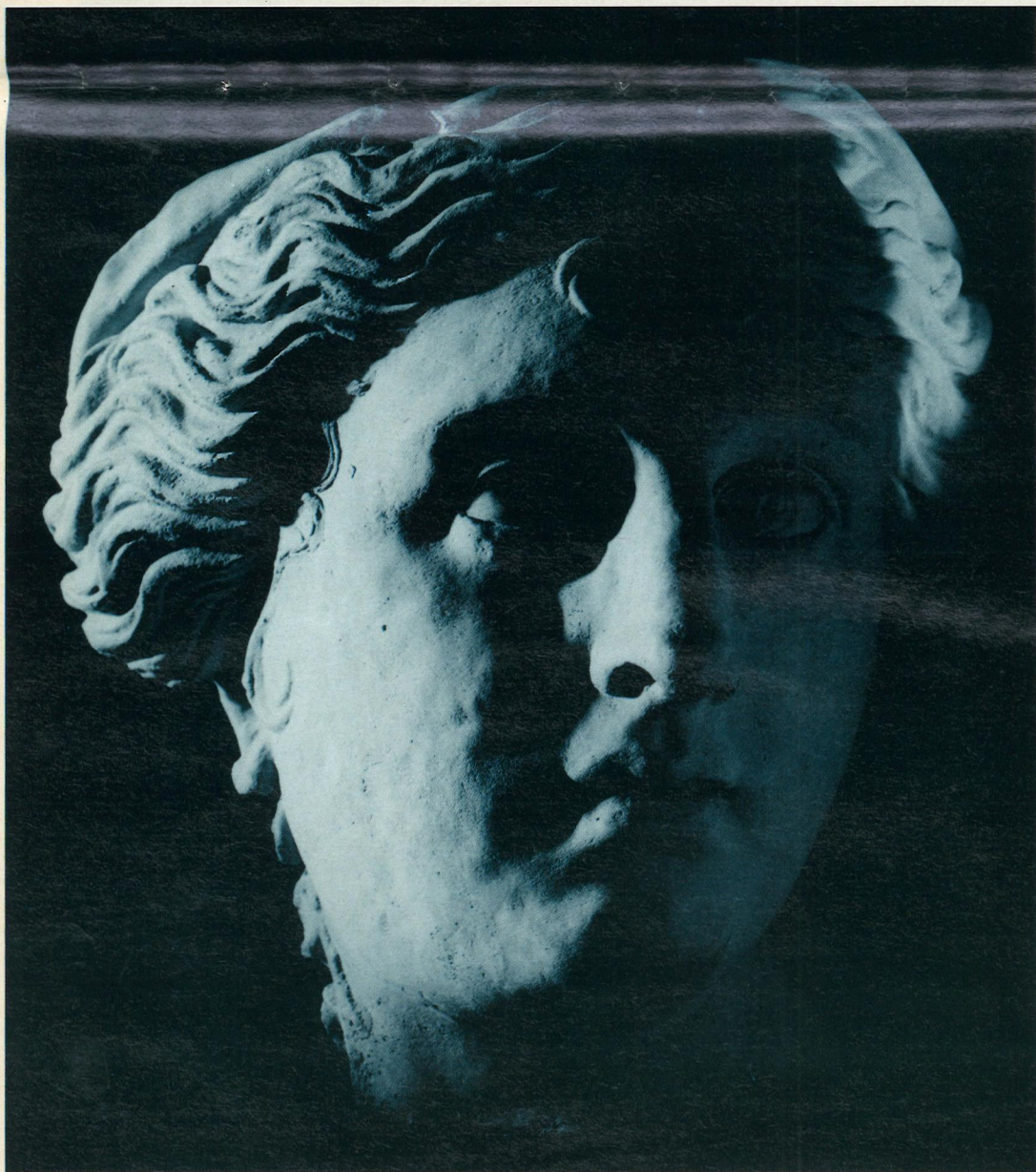


Energy saving, display lighting units by Crompton.

have been converted to electricity.

Crompton will exhibit a selection of lamps and luminaires. Tufflite 65, a range of corrosion resistant fluorescent luminaires with ingress protection to IP65 standard, will be on show. They

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a passive infra-red switch called Watchman 3000 with a capacity to operate 3000W of tungsten or 1500W of tungsten halogen lighting. It has a detection range of 100° over a distance of 15m.

Master Brass range of electrical accessories will also be new. The front plates are cast brass with white inserts.

Other products on show will be an adjustable photo-cell switch with a capacity of 4A, the OnGard stand-alone PIR switch and Homelite and Homewatch.

Illuma Lighting will be showing its 2.4m, 300VA low voltage Marktrack, low voltage downlights, compact fluorescent downlights with integral gear, low voltage electronic spotlights, metal halide luminaires for track and surface mounting, and mains voltage lighting track.

Energy saving will be the main theme of the stand.

LightGraphix will be launching Lux-Duct which provides decorative lighting features in, for example, atria, either vertically on

columns or horizontally at high level. It can also provide cove lighting, or illumination under soffits or behind valances.

Another application is for interior and emergency lighting in coaches, trains or aircraft.

Light is projected from a remote light source along a duct, providing an even distribution of light throughout the length of the tube.

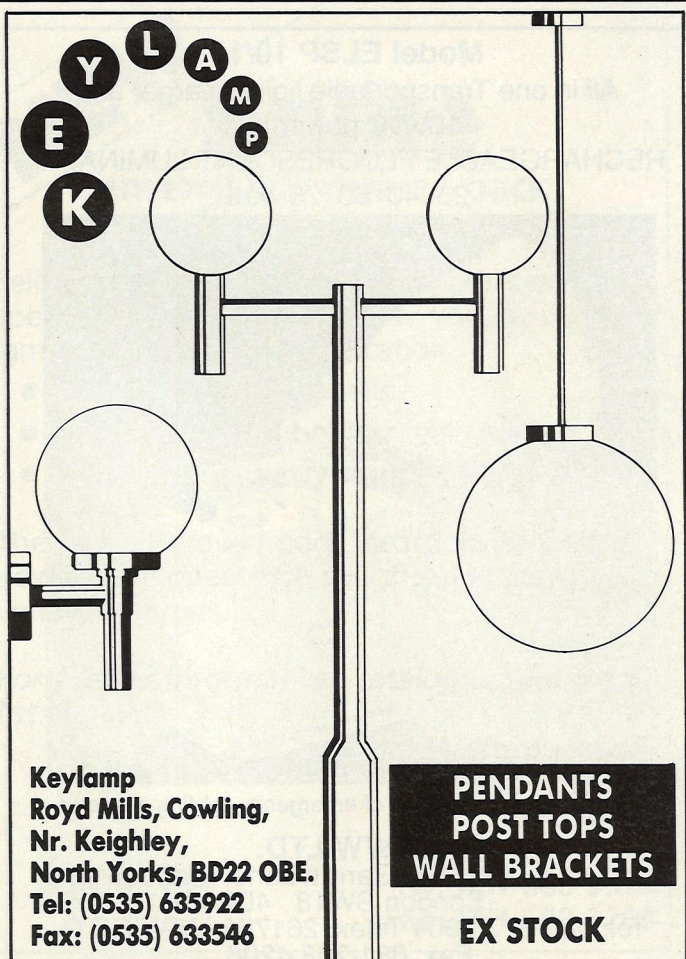
A variety of light sources may be used with Lux-Duct, including low voltage tungsten halogen, metal halide and White SON. The lamp is located in an easily accessible place making routine maintenance simple.

On show also will be a new range of uplights, low voltage diecast downlights, and a new low voltage transformer system.

Along with these new products, LightGraphix will be showing its full range of lighting, including light tube and linear lighting systems, low voltage tungsten halogen spotlights and metal halide luminaires.



Lux-Duct, by LightGraphix, set into pillars.



Shelf Light by Axis Lighting — a ribbon conductor carries the power.

Orbik Electronics will unveil a new range of electronic transformers rated at 105VA, 150VA and 250VA.

They have been designed to a high specification with features that Orbik feels will appeal to the existing market and have a wider

commercial application.

The existing range of 50VA and 75VA transformers has been improved and extended.

To complement **Smart and Brown's** high light output emergency lighting, an economy long tube module has been introduced. It requires six cells to operate three-hour maintained or non-maintained lighting using 16-40W lamps.

A new range of electronic Fluoropulse starter switches provides an instant start for extended lamp life, while new to the range of high frequency ballasts, is a twin 18W version for silent starting and flicker-free operation.

Smart and Brown will also display a range of safety extra low voltage electronic transformers. In-line transformers for remote use include the TEC150 with auto-resetting short circuit protection and soft start. This model is designed for use with up to three 50W lamps when the transformer has to be mounted on view. The TEP50 is an electronic transformer inside a ceiling plate.

Finally, there will be a range of integral transformers to fit into luminaires. These transformers include fail safe short circuit protection, thermal overload and mains transients protection.

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Hanover '91

Major stands

Part 1 of *LEN's* guide to what the UK's independent exhibitors and their mainland European competitors are showing at the world's largest lighting fair.

The Hanover Fair marks the European launch of **GE Thorn Lamps** formed by the highly publicised merger of GE and the light sources divisions of Thorn Lighting (Hall 9, First Floor, Stand B32).

A version of the 10W 2D lamp is now available in the same format as the PAR 38 lamps. In addition to IP 34, separate indoor

and outdoor versions will be available to cover applications ranging from interior ambient downlighting to exterior garden and security lighting. Light output is equivalent to a 60W gls lamp with a wide beam.

On the display front, GE Thorn is launching an innovative lamp and lampholder system. Aptly named Twist and Lock, the light source is claimed to be the first

Thorn Modulite PS range of luminaires.

user friendly mirror lamp. A simple twist action eliminates the use of force during installation.

This new development has also been applied to 100mm sealed metal reflector lamps. Available in 3 wattages (35W, 50W and 75W), the reflector has been designed to achieve a high intensity of light and incorporates a metal ring along its edge, providing a secure mechanical fixing to the front glass.

In addition, the sealed mirror lamp maintains its light output in dirty and harsh environments and

helps to protect the capsule. The lamp comes in spot and medium flood angles.

From the same company comes a sealed lamp using Optivex, a UV filter manufactured by Bausch and Lomb, which does not transmit radiation below 400nm. The product is designed to reduce degradation of works of art and other sensitive display items.

Discharge lamp development features the Arcstream range of compact single ended metal halide lamps. The range has been

The Twist and Lock system from GE Thorn.

extended to include a neutral white (4000K) 150W lamp to complement the existing warm white 150W lamp and 70W lamps in both colours.

Transferred to higher wattage lamps this technology creates the Kolorarc MBI-T tubular metal halide lamp. The 250W lamp has been designed to improve efficiency by up to 20%, while producing a higher quality light output.

Higher output

SON Classique is a new range of colour corrected high pressure sodium lamps which combine the quality of SON Deluxe with the efficiency of SON XL to provide lamps with higher light output, longer life and greater stability.

Finally, new to the SON XL range is a 50W lamp which is suitable for all amenity lighting applications. It acts as a replacement for 80W mercury lamps, reducing energy consumption by one third while increasing illumination levels.

Equally, this is the first Hanover Fair at which **Thorn Lighting (Hall 10, Stand 520)**, has had a presence purely as a luminaire company; light sources are now part of the new GE Thorn. One feature of the stand, however, is the distinctive contribution made by each of the national companies within the Thorn organisation.

Of particular interest to most fairgoers will be Thorn's German products. These will include the Modulite PS range, a modular recessed or semi-recessed fluorescent fitting giving maximum flexibility in areas where VDUs are intensively used.

The PS range of lighting from Thorn's German subsidiary minimises the incidence of glare on VDU screens while allowing for a rapid redesign of layouts to respond to the changing needs of

today's office.

The luminaire is based on a mirror reflector designed to split lighting into primary — or direct — and secondary — or indirect — components. Light output is divided up in the proportion of 2/3 indirect to 1/3 direct light output. The combination of this mirror reflector, the lamp housing and the optical systems, together with longitudinal and transverse louvers eliminates the danger of glare from reflection on the computer screen through 360° and maximises contrast.

Thus, both VDU work stations and desks can be placed anywhere within the working area. In the past permissible glare levels have been exceeded where work stations have been placed parallel to the length of the room. The PS range combines meeting the requirements of DIN 5035 with free work-place planning.

This system is an extension of the Modulite series. It can be integrated into the basic Modulite housing and used with standard ceiling modules of 600 mm and 625 mm.

The luminaires are simple to install and give high levels of efficiency; even the secondary lighting component from the luminaires is 69% efficient. Further advantages include a wide range of models; and large area reflectors which permit a reduced depth of fitting for 40W, 2L 36W and 58W lamps.

Reflector versions

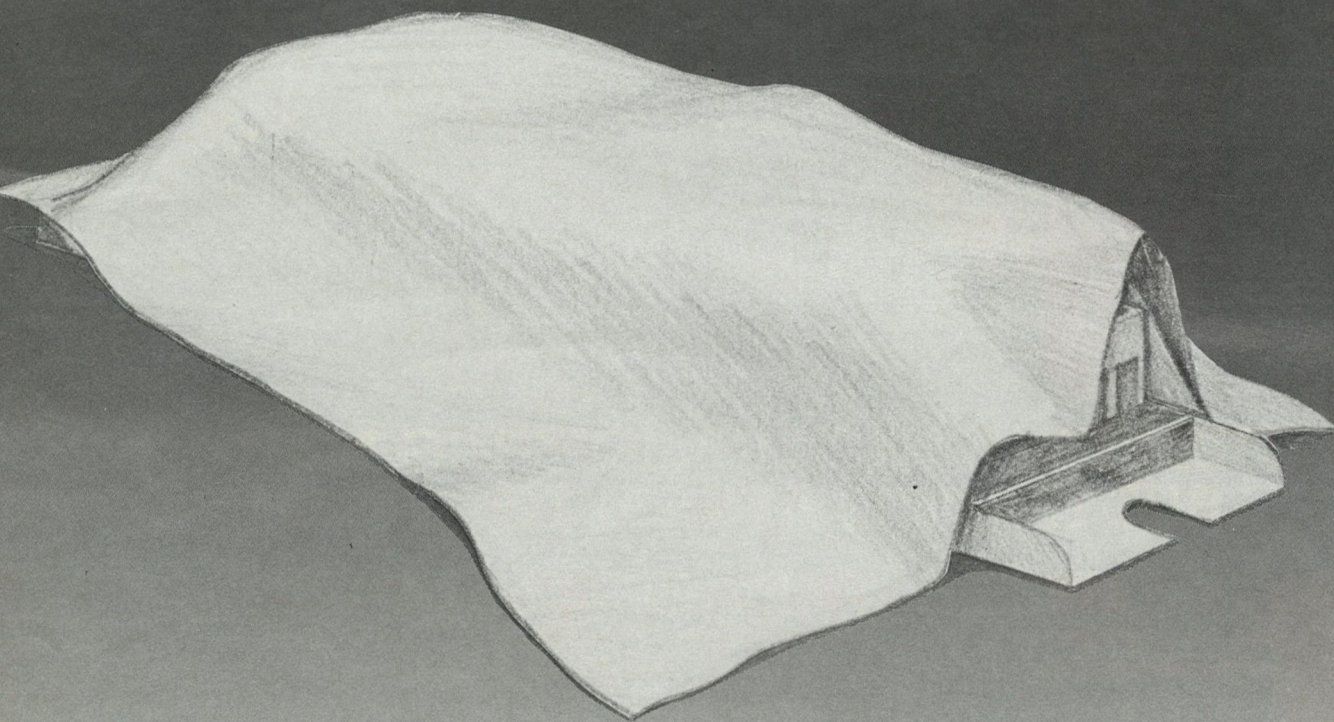
The German contribution will also include a display of Primat II, a range of trunking mounted fluorescent fittings. Three new reflector versions are shown for direct/indirect lighting, for IP 54 environments and for decorative areas.

The latest UK developments will also be shown including Sensa, an intelligent lighting

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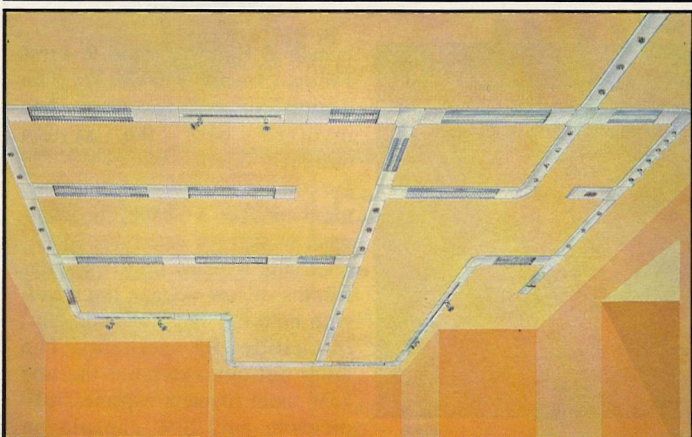


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Multilite 8000 linear system.

management fitting for offices and the new CSP Index, a new rating system for measuring the quality of office lighting.

From Italy comes Multilite Systema 8000, a flexible linear lighting system for retail and commercial interiors. Multilite Systema 8000 is a series of slim, oval profile tubes which can house different forms of fluorescent and spotlighting.

A wide variety of modules is available including: single or twin fluorescent modules; low voltage downlights and track mounted units with electronic transformers; mains voltage track versions for mounting spotlights and modules with recessed tungsten halogen floods.

Suspension method

The system, which complies with IEC 598, is available in white, red, grey or black finishes. It can be mounted directly onto ceilings or suspended using a static line suspension system. The slim, extruded aluminium modules are joined by means of die cast junctions with linear connectors.

From Thorn Europhane in France comes Bionic, a single-ended discharge spotlight and Voyager, a low voltage spotlight with its own integral electronic transformer. Bionic is designed to take a variety of lamps including 50W/150W metal halide, 50W/100W white SON and 100W tungsten halogen.

An additional feature on the stand is a new universal display track adaptor giving direct access to five different types of track. Finally, Scandinavia produces a Swedish range of amenity lighting and a programme of downlights from Finland.

Hurry along to the **Philips Lighting** stand (Hall 9, First

Floor, Stand C32-E43) to preview a break-through in lighting technology: induction lighting. The system will only be officially launched in May 1991 to coincide with the company's centenary celebrations. While there take a look at Ergovision, an office lighting system which enables the lighting of an office to be adapted to suit the work being carried. The product will be launched later this year.

On a more mundane level, the emphasis today is on economy, so fluorescent lamps are another area of very active development. A new range of PLC electronic compacts is confidently predicted to meet a wider range of applications. In addition, a special range of PL lamps has been developed for amenity lighting. This features good, colour rendering and a white light colour as well as long lamp life and low energy consumption.

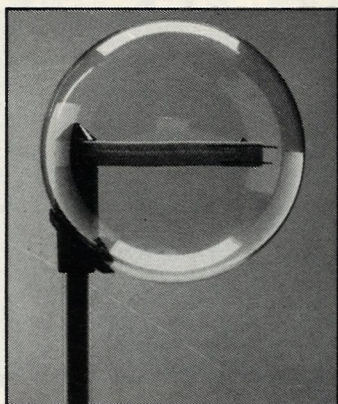
New TL lamp types cover a large number of applications. For example the TL/90 series is intended for professional colour matching and grading in industries such as in paint, clothing, textile and design.

Included in this series is the TL/96 which produces natural daylight. In addition to being used for colour matching and grading purposes in places where there is too little daylight, it can also help combat seasonally-related depression.

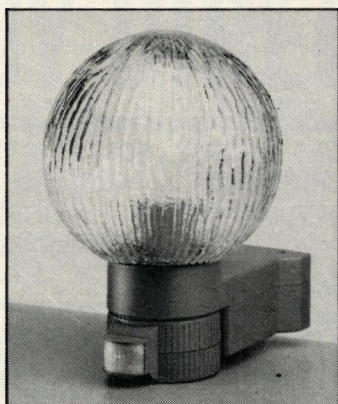
Food presentation

The TL D/79 series has been specially developed for emphasising red colours and so is suitable for enhancing meat and poultry presentations in shop-counter and window displays.

On the display side, the company is extending its ranges of compact HID lamps, including



Decovision for outdoors.



Philips' security lamp.



Futura by Brillantleuchten.

new white SON and high pressure mercury light sources. New halogen display lamps include four colour versions of the Masterline dichroic lamps and a new Standard Dichroic range.

New domestic/decorative contract items include a 60W version of the Halogena lamp which is suitable for retrofit applications, but still gives the light quality expected from a halogen light source.

Deco Line is a range of four lamps for indoor and outdoor decorative lighting which is designed

to be visually appealing even when switched off. The Deco Crystal and Deco Candle versions create a sparkling effect, while the Deco Classic and Deco Spiral have been specifically designed for outdoor use in places where a soft, warm ambience is desired.

Exterior lighting

New exterior lighting includes Decovision, a range of luminaires for distinctive outdoor lighting and an extended range of passive infrared security lights for home protection.

Among specialist lamps the new TUV germicidal lamp is designed to destroy micro-organisms efficiently. Not only does it have a long life of some 8000 hours, but it is claimed to maintain its effectiveness throughout its life.

Finally, the new range of accessories launched at Hanover includes a series of new electronic ballasts. The reduced size of some of these will allow greater freedom in luminaire design.

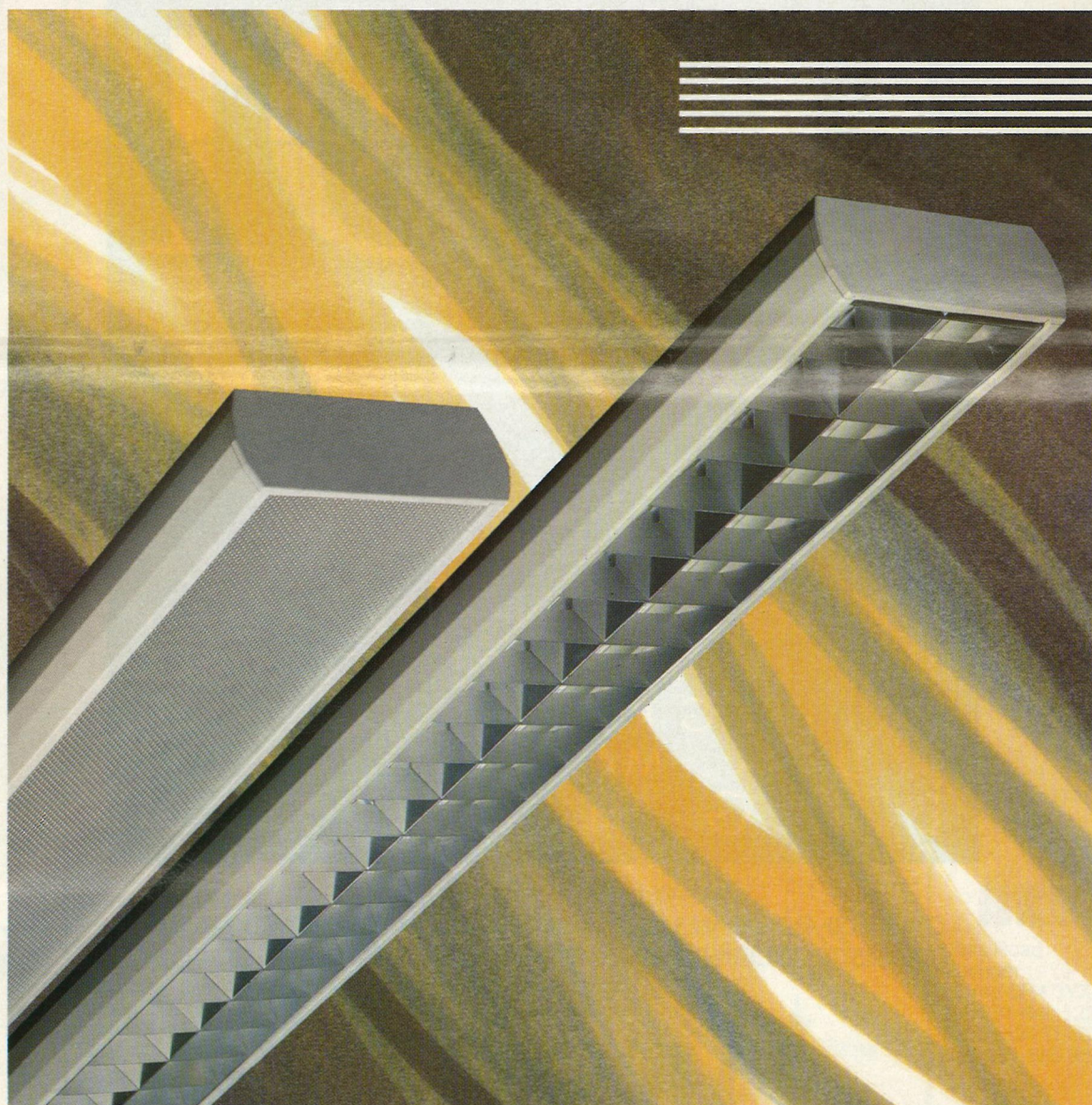
On the decorative front, the

new collection from **Brillantleuchten** (Hall 9, Ground Floor, E36) includes a number of different low voltage spotlights, a selection of uplighters and a new exterior luminaire. A series of spotlights satisfies a variety of taste from the colourful to the classic. The Futura range has an integral transformer and is available in one-, two- or three-armed versions in three colour options.

Ergos spots combine an aluminium finish with decorative copper trim to create a modern shape which is also available in

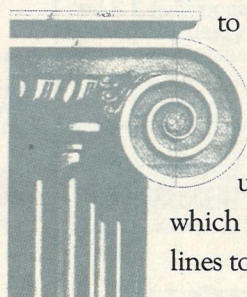
HAWKER

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CHEVIN—GOOD LOOKS, SOUND ECONOMY

In office lighting installations, particularly where low glare and low cost are required, it is sometimes necessary to sacrifice good design to achieve the desired result.



Now, with Crompton's Chevin, you don't need to. The secret's in a unique, one piece body which provides clean, classic lines together with significant

production cost savings.

The result is a multi-option surface mounted luminaire, with either Louvre or Prismatic Controller, in single or twin lamp format. So Chevin gives you the good looks you want, with the sound economy you need.

A full colour brochure is available, on request.

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Selite's new compact PP power pack is designed specifically for converting low voltage dichroic lamps to emergency application.

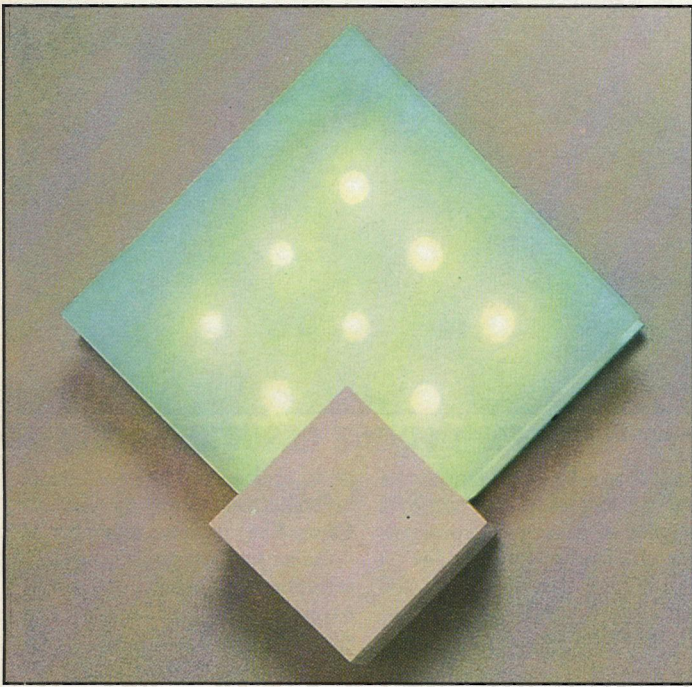
- No unsightly bulkheads
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The new PP power pack incorporates Selite's newly developed high specification constant voltage charger.

For further information, catalogue and price list contact:

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19 Stafford Road,
Croydon,
Surrey, CR0 4NG.
Tel: 081-686 9919
Fax: 081-680 9288

Selite



Brendel's Plano fitting.

one-, two-, or three-armed versions with a choice of integral or remote transformer.

Queen is one of a new family of uplighters. It uses a 300W halogen lamp with an adjustable

glass reflector. Finally the exterior range has been expanded to include Soca, a new series of wall and pole-mounted low voltage fittings.

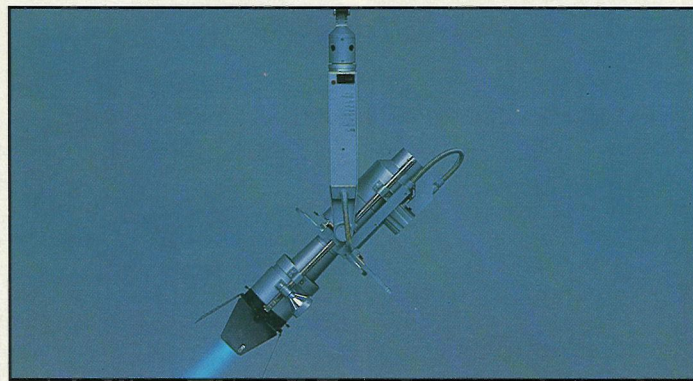
Brendel (Hall 10, Stand 31-

39), is introducing the Plano range of luminaires. These wall fittings in satin finish glass with an aluminium reflector and gear box finished in white, come in round or square versions. The square luminaire is available in a choice of light sources: 18W TC-L compact fluorescent; eight 10W 12V halogen lamps; or an 18W compact fluorescent with emergency facilities. This model fixes flat to the wall. The round version comes in the compact fluorescent lamp only but can be obtained in two variants — for fixing flat against the wall or perpendicular to it.

Prism shaped

The same company is also launching the Prisma HQI-T fitting. This uplighter has an adjustable, prism-shaped head, and control gear is integrated into the main housing which is in the form of a square tubular section. The lamp uses a 280mm HQI lamp of 70W or 150W, the latter giving a hefty light output of 11500 lumens.

From **Erco (Hall 10, Stand 200-202)** comes Emanon, a



Projector from Erco's Emanon range.

range of projectors developed in collaboration with Roy Fleetwood. This reflects the growing interest in the use of effects lighting, derived from stage lighting, for architectural purposes. Although conforming to the German VDE standard for stage lighting, the range is actually designed for continuous use, in contrast to normal stage lighting, and uses only long life lamps. These include metal halide lamps of up to 600W, tungsten halogen lamps of up to 1000W and 75W dichroics, depending on the luminaire.

Emanon is based on the principle of the 'optical bench'. Each component or accessory is visually expressed, none are hidden by housings. This gives the range a hi-tech instrumental look. Modules are held together and guided by two parallel rods, supported by a U-shaped stirrup. This layout of components optimises ventilation of the lamp and facilitates the use of accessories.

Luminaires come in two sizes, 150mm and 250mm, forming the 150 and 250 ranges respectively. The 150 range comprises a condenser projector, and an ellipsoid projector with interchangeable optical systems giving beam widths of between 10° and 30°. Gobos, logos, and framing masks can be projected, and colour effects can be obtained by using colour filters.

The 150 programme includes a fresnel projector with stepped lens to provide a soft focus edge. By adjusting the position of the lens the beam width is adjustable between 10° and 60°. Barn doors prevent glare.

Segmented reflector

The 250 parabolic spotlight has a new segmented reflector that creates intense but soft-edged beams. Diffusers permit the control of both beam intensity and emission angle, and the beam can be modified to give an oval shape, if required.

When these projectors come equipped with PAR64 low-voltage lamps of 120W/12V, they generate an extremely narrow beam of light of high intensity.

The 250 range also includes fittings designed for dichroic sources, and a wall washer which uses tungsten or tin halogen sources.

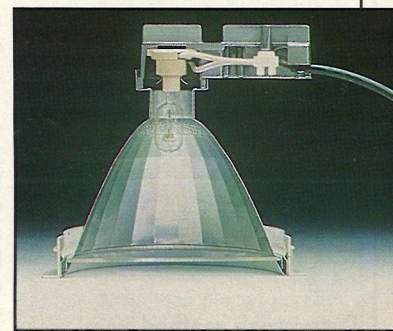
Infinite, an innovative lighting concept capable of providing three dimensional configurations, is **Concord Lighting's** major

launch at Hanover (**Hall 9, First Floor, Stand F07-F13**). The design of this system has involved both the system designer, Terence Woodgate, and the company's own design department in over a year's development work.

Infinite is made up of modular lengths of low-voltage track rail, with both top and underside clip-in facilities for spotlights. The lamp options available include 75W axial filament capsule, 50W dichroic and 20W capsule on modular lock-in suspension rods.

Both curved track and hinged and corner modules feature an unusual pointed end cap. Transformers are either surface mounted or remote.

At the time *LEN* went to press, pictures of this system were not yet available, but we hope to take a more detailed look at the development of this product in a future



Concord downlight.

issue.

Concord is also augmenting its choice of downlights with the introduction of Advanced Equinox, a new downlighter range with a luminaire output efficiency of up to 80%. Fittings come in two different beam widths: a narrow 25° beam and a broad 60° beam.

Lamp options available include tungsten halogen, white SON, metal halide, and dual cone — a narrow beam version specially designed for exceptionally high ceilings.

A new faceted reflector is designed to give improved light distribution, and a rolled borosilicate safety glass forms an integral part of the luminaires. A UV filter is available as an alternative.

All models are fitted with die-cast aluminium lampholders and integral wiring boxes and can be mounted in dry ceilings from 10-30mm thick. The company is also producing decorative glass accessories for these luminaires which reflect the light across the ceiling surface.

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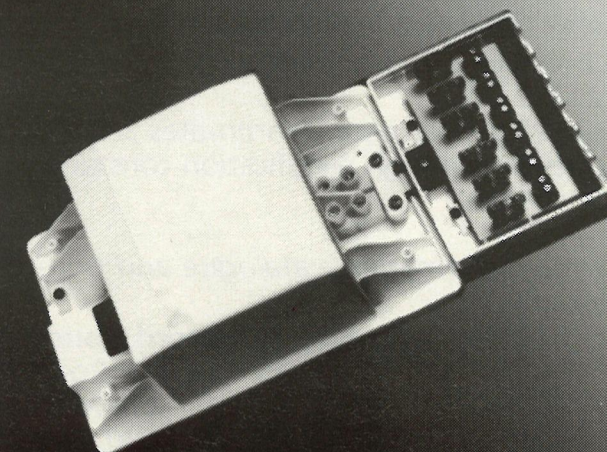
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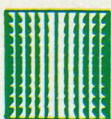
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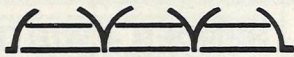
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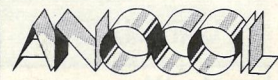
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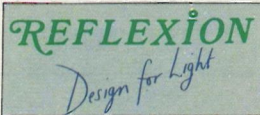


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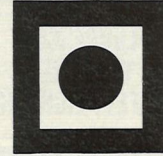
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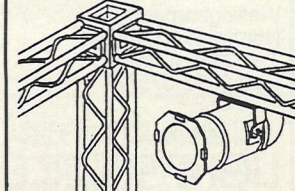
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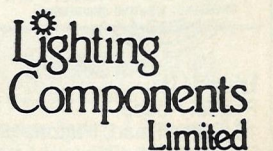


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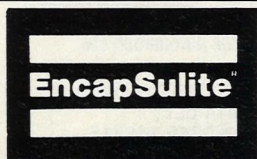


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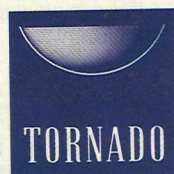
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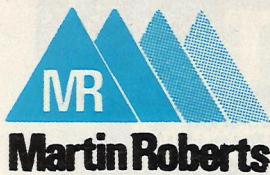
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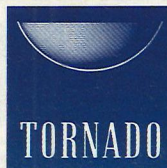


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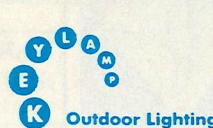


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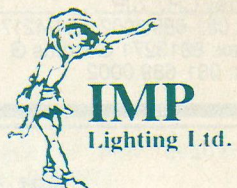


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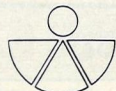
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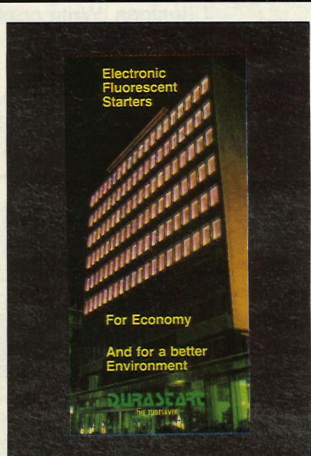
For further details on this
highly successful and fast
growing section please
contact:

Alastair Moyes on
081-975 9759

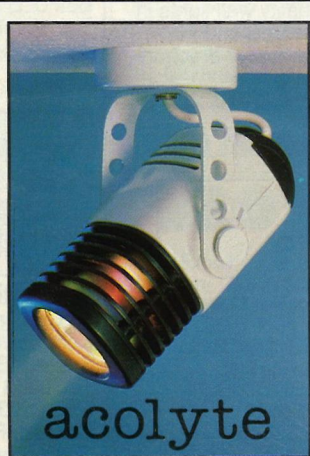
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CATALOGUE DIRECTORY

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Advanced Lighting Industries
has produced a brochure that
compares its DURASTART
fluorescent starter with
conventional starters.
Advantages featured are: the
virtual elimination of tube
blackening; 50% reductions in
tube replacement costs; a 70%
saving on programmed and
interim maintenance costs; and
flicker free operation. circle 90



Polestar is a new low-voltage,
low energy spotlight from
Acolyte Lighting Services,
incorporating its own miniature
built in transformer. It can be
wall/ceiling mounted or used
with most existing lighting
tracks and unlike any other light
of this type it has the capacity to
use 50W or 75W dichroic
reflector lamps: circle 95

LB

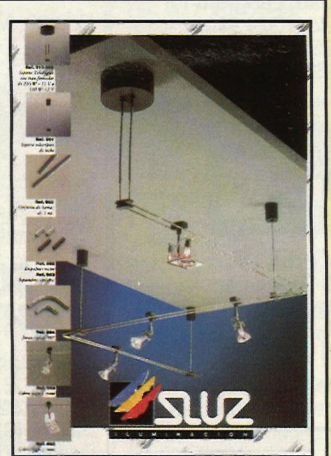


Specialist luminaire
manufacturers, L. B. Lighting
Limited have published a new
full colour catalogue which
includes comprehensive ranges
of Uplites, Tubelites, Globelites,
Flourescent luminaires and
Downlights together with
illustrations of purpose made
units: circle 99

How many men do YOU need
to change a lightbulb?



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inaccessible lamps. Suits
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safety. Interchanges with our
Fire Sensor Test and Access
Tools. New Catalogue. Wider
range: circle 93



Acorn Lighting is introducing
the SLUZ range of lighting
products from Spain. This high
quality range of products,
include a low voltate Rod
system, low voltage and mains
voltage downlights, Metal
Halide downlights and spots,
Track system and a complete
range of compact source
fluorescent downlights: circle 94

TO ADVERTISE IN CATALOGUE DIRECTORY PLEASE CALL ALASTAIR MOYES ON 081-975 9759

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Interviews will be held in London in April/May 1991.
It is important that the applicant for the senior lighting designer has had at least 6 years experience in lighting design, and is good at marketing and general project administration, as well as maintaining good client relationships.
The junior lighting designers need at least 3 years experience of working in a lighting design office, and have had reasonable experience at both design and coordination.
All applicants should write, in confidence to: Mr Tony Corbett, Corbett Design Associates (Pte) Ltd, 400 Orchard Road, #16-05 Orchard Towers, Singapore 0923. Tel: 7343912, Fax: 7378784.
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A course designed for those who have very little or no formal lighting education. The course comprises formal lectures, laboratory work and tutorial sessions. Delegates should appreciate that some mathematics are involved and should be able to use a simple scientific calculator. Tuesdays and Thursdays 3.00pm-8.00pm, commencing Tuesday 16th April 1991 — Thursday 2nd May 1991. Course fee £315 including refreshments.

Intermediate Lighting Design

A course in Lighting Design for people with a basic knowledge. This would include those concerned with consultancy, installation, or manufacture of equipment and those who have completed the Fundamentals of Lighting course. Mondays and Thursdays 3.00pm-8.00pm, commencing Monday 13th May 1991 — Thursday 6th June 1991 (Equivalent 3 days). Please note no classes during week beginning 27th May 1991 (Spring Bank Holiday). Course fee £315 including refreshments.

A course attendance certificate will be issued on completion of each course. For further information and registration please contact:

The Centre, Room 201a, Dept. IoEE, Polytechnic of the South Bank, Borough Road, London SE1 0AA. Tel: 071-928 8989 Ext. 2025/071-928 8968 (Direct line) Fax: 071-928 2306.

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Julian Ding, Fibre Lite U.K. Ltd
Executive Centre,
Midland House, Halesowen,
West Midlands B63 3HY

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Send detailed C.V. in strict confidence quoting ref. A.C.M. to:

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Unit 31, The Cam Centre,
Wilbury Way, Hitchin, Herts SG4 0TW

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LETTERS

CSP Index

Thank you for giving front page prominence to the story that we have developed the first rating system for office lighting quality called CSP Index. I would be grateful if you would explain two points to your readers.

1. Both Bob Bean and Thorn Lighting genuinely wanted to provide a useful tool for rating office lighting quality — the commercial benefit to Thorn Lighting is limited to the kudos.

2. The CSP computer model has been released as Shareware and includes a working copy of the Hyperlite office lighting pr o-

gram produced by J Lyles and W Burt. No charge is made for the CSP program itself but there is a small fee (about £3.50 plus postage according to disk size. Anyone who rings us on 0800-289-869 will get information on CSP and details of how to get the disk.

It is in everyone's interest, from users to manufacturers, to promote better lighting quality and we hope that the CSP Index will be a useful tool to help encourage good design and the use of the CIBSE Code.

Bob Bell,
Company chief lighting
engineer,
Thorn Lighting.

The sky at night

We welcome the Lighting Industry Federation's call for more cash to make street lighting more efficient and to reduce light pollution (LIFLINE November 1990).

However there is much that authorities can do to improve, at a relatively low cost, lanterns like those at Milton Keynes that were chosen more for their appearance than their admittedly poor photometric performance.

We, at Buckingham County Council, feel that we now have a solution which resolves the conflict. Working with an LIF member (Urbis Lighting Ltd) we have developed a high performance optical unit which is fitted inside the Globe lantern, dramatically improving its night-time performance and, therefore, its

energy effectiveness. This puts the light where it is needed and not upwards, thus reducing light pollution. All this without affecting the daytime appearance.

This is just one of several projects we are working on to improve the lighting in Milton Keynes and we hope that, through the pages of *LEN*, other authorities can learn from our experience.

T S Bulmer,
County lighting engineer,
for County engineer,
Buckingham County Council.

The editor welcomes letters from readers on topical lighting matters. They should be addressed to: *Lighting Equipment News*, Maclean Hunter House, Chalk Lane, Cockfosters Road, Barnet, Herts EN4 0BU.

TRADE PUBLICATIONS

In brief . . .

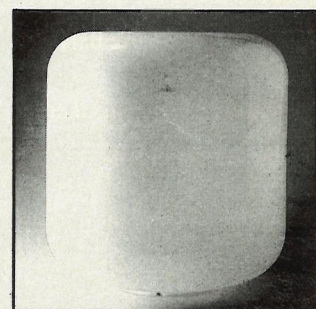
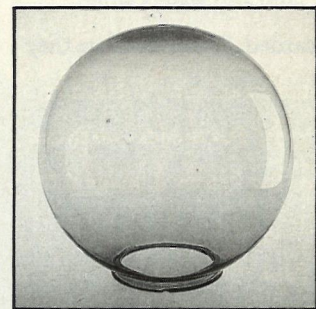
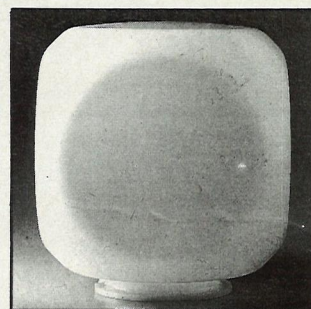
● **Tenby Electrical Accessories** catalogue is now available. has a 21-page catalogue of luminaires. Tel: 021-200 1999.

● **Menvier's** 122-page *Design handbook* gives details of emergency lighting and fire detection systems. Tel: 0295 256363.

● **Elemsystems** has a brochure on dimming. Tel: 0628 777878.

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V & A shop revamped

When the Victoria and Albert Museum shop, which generates sales of some £1.4 million each year, needed improved display cabinets, this posed problems.

It was not difficult to provide a more efficient means of lighting the cabinets than the existing system with downlighters mounted in the 3m high ceiling above. The challenge rather lay in providing

suitable modern lighting to blend in with the museum pieces and the decor.

Working with Caroline Seymour, the manager of V & A Enterprises Ltd, Luna Lighting designed special light fittings based on their Orbit luminaires which were mounted onto chrome rods. The low voltage electronic transformers were given triang-



ular housings to enable them to fit into the corners of the all-glass display cabinets.

The luminaires provide a very white bright light and are also positioned to avoid glare — an important consideration since the displays are at eye level. Part of the design brief was to avoid heat build up that could adversely affect the plate glass sides of the cabinets. Light sources used were 35W dichroic lamps with a broad beam.

Moveable displays

The V & A shop was originally designed 4 years ago by David Davies Associates to give a series of moveable displays enabling different arrangements. It was even envisaged that the location for the entire shop could be changed if this was ever required. The shop currently occupies nearly 200m² of floor space.

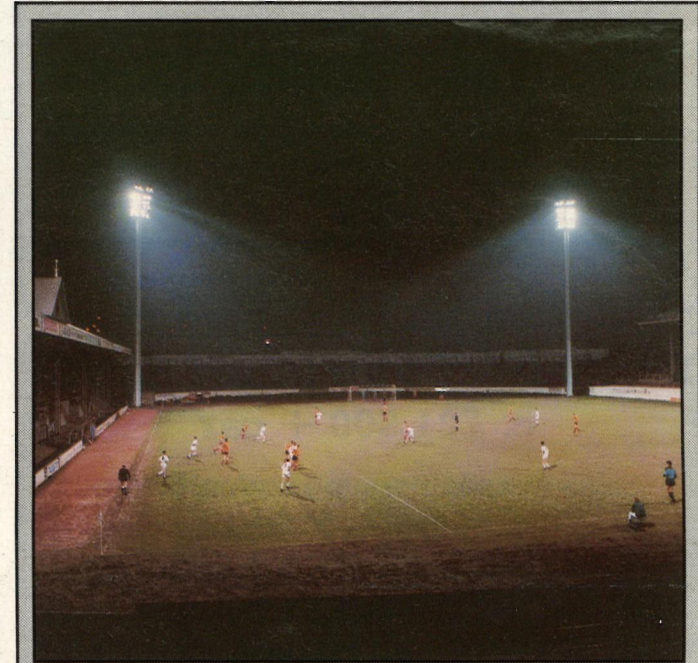
Lighting Industry Golf Society

The LIGS annual dinner took place at the RAF Club, Piccadilly, London on 5 February. Tony Smith, Hon Secretary of the Society announced that the Captain's Trophy for 1990 was won by Tom Cartledge of T. Cartledge, with Barry Ramsey of David Webster coming in second place.

Captain for the 1991 season is Barry Ship of AEG Capacitors (UK), while Gordon Sugden of Airedale Springs takes over as Vice-Captain.

LIGS meetings arranged for 1991 include some new venues: 30 April, The Addington; 11 June, Richmond Golf Club (guest meeting); 19 July, Wilderness Golf Club; 17 October, St George's Hill. The Christmas meeting is planned for 5 December at the RAC Club.

Tony Smith thanked all the companies which generously presented prizes during 1990 and said the Society was looking forward to another successful and enjoyable season this year.



Partick Thistle Football Club's Firhill Park ground has been lit by Philip's Arenavision MVF406 luminaires — the first UK installation of Arenavision for sports ground use. Each luminaire houses one 1.8kw metal halide lamp, giving a total illumination level of 100 lux, with a total installed load of 181.44kW. The luminaires are mounted on cross arms at the top of four 32.5m high masts, with twenty four luminaires to each mast.

Quest Emess

Poole acquired the business of Quest Emess Ltd on 16 January 1991.

Trevor Hodder has been

appointed managing director of the combined business which will trade as Poole Lighting Ltd and be located at Poole, Dorset. Both companies are wholly owned subsidiaries of Emess plc.

IN YOUR NEXT ISSUE

Public buildings must make their mark in an increasingly image conscious age — but are expected to do so cost effectively. *LEN* reviews some recent installations in the public sector — ranging from the ultra-modern,

through the conservationist approach to the purely economical.

We also hope to publish part two of our review at the World Light Show at the Hanover Fair, Europe's premier lighting event.

Of course we could revert to candles for lighting. Failing that, the most environmentally friendly way of producing light is to economise on the planet's resources wherever and whenever possible by keeping them useful as long as possible.

And that's exactly what Pulsestarter does. By doubling the life expectancy of your fluorescent lamps, the glass, metals, minerals and other finite resources contained within them last longer. Like many products today fluorescent tubes pollute our land and waters when discarded. That's because they contain toxic substances such as mercury. But the less we throw away, the less we damage the earth.

And, when you only have to buy half as many tubes the less you damage your bank balance.

Pulsestarter — economical and ecological common sense.

